

## Safety Data Sheet

**Product Name:** Acid Fiber Rinse

**Revision Date:** June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Acid Fiber Rinse

**Product Use:** Rinse Aid

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	1
Flammability hazard	2
Reactivity hazard	1
Other hazard	

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### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. Isopropyl Alcohol	67-63-0	10-20%
3. Citric Acid	77-92-9	10-30%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

**Product Name:** Acid Fiber Rinse

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## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

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### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Isopropyl Alcohol	500ppm	200 ppm	400ppm
3. Citric Acid	not established	not established	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Country Fragrance

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 2.25

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

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### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                      |   |
|----------------------|---|
| 1. Surfactant        | LD50 Oral – rat – 1,800 mg/kg<br>LD50 Dermal – rabbit – 8,000 mg/kg   |
| 2. Isopropyl Alcohol | LD50 Oral – rat – 5,045 mg/kg<br>LC50 Inhalation – rat – 8 h- 18,000ppm LD50 Dermal – rabbit – 12,800 mg/kg |
| 3. Citric Acid       | Not Established   |

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                      |   |
|----------------------|---|
| 1. Surfactant        | LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h      |
| 2. Isopropyl Alcohol | LC50 – Pimephales promelas(fat head minnow) – 9,640 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 5,102 mg/l – 48 h |
| 3. Citric Acid       | Not Established   |

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### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Surfactant
2. Isopropyl Alcohol
3. Citric Acid

#### REGULATION

not established  
not established  
not established

## Safety Data Sheet

**Product Name:** Acid Fiber Rinse

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### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.



## Safety Data Sheet

**Product Name:** Alkaline Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Alkaline Tile Cleaner

**Product Use:** Tile and Grout Cleaner/Concrete Cleaner

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H318 Causes serious eye damage.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

**Product Name:** Alkaline Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Potassium Hydroxide	1310-58-3	10-30%
2. Surfactant Blend	not established	5-20%
3. DIETHYLENE GLYCOL ETHER	34590-94-8	3-15%
4. xylenesulfonic acid sodium salt	1300-72-7	1-10%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

**Product Name:** Alkaline Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

**Product Name:** Alkaline Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Potassium Hydroxide	2 mg/3	2mg/3	Not Established
2. Glycol Ether EB	25ppm	25ppm	50 ppm levels
3. Surfactant Blend	Not Established	Not Established	Not Established
4. xylenesulfonic acid sodium salt	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Gel Liquid

*Odor:* Country Fresh

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Yellow/Amber

*pH:* 13

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

**Product Name:** Alkaline Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. Potassium Hydroxide	LD <sub>50</sub> Oral - rat – 365 mg/kg LD <sub>50</sub> Dermal - rabbit - 365 mg/kg
2. Glycol Ether EB	LD <sub>50</sub> Oral - rat - 470 mg/kg LC <sub>50</sub> Inhalation - rat - 4 h - 450 ppm LD <sub>50</sub> Dermal - rabbit - 220 mg/kg Eyes - rabbit - Moderate eye irritation - 24 h
3. Surfactant Blend	Not Established
4. xylenesulfonic acid sodium salt	Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. Potassium Hydroxide	Toxicity to fish LC <sub>50</sub> – freshwater fish - 179 mg/l - 24 h
2. Surfactant Blend	Not Established
3. Glycol Ether EB	Toxicity to fish LC <sub>50</sub> - other fish - 220 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates EC <sub>50</sub> - Daphnia magna (Water flea) - 1,815 mg/l - 24 h
4. xylenesulfonic acid sodium salt	Not Established

## Safety Data Sheet

**Product Name:** Alkaline Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Potassium Hydroxide

2. Glycol Ether EB

3. Surfactant Blend

4. xylenesulfonic acid sodium salt

#### REGULATION

**OSHA Hazards:** Harmful by Ingestion; Corrosive

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard

**OSHA Hazards:** Combustible Liquid, Target Organ Effect, Harmful by ingestion. Harmful by skin absorption. Irritant, Carcinogen

Not Established

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard Chronic Health Hazard

**MA, PA, and NJ Right to Know:** 2-Butoxyethanol CAS-No.111-76-2  
Not Established

## Safety Data Sheet

**Product Name:** Alkaline Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

**Product Name:** Big Guns Spot Remover

**Revision Date:** June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Big Guns Spot Remover

**Product Use:** Spot Remover/Cleaner

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	1
Flammability hazard	0
Reactivity hazard	0
Other hazard	



## Safety Data Sheet

**Product Name:** Big Guns Spot Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. Isopropyl Alcohol	67-63-0	10-20%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

**Product Name:** Big Guns Spot Remover

**Revision Date:** June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

**Product Name:** Big Guns Spot Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Isopropyl Alcohol	500ppm	200 ppm	400ppm

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Desert Rain

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Clear/Light Amber

*pH:* 11.5

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

**Product Name:** Big Guns Spot Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

*Chemical Stability:* Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

*Conditions to avoid:* Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

*Incompatibility with other materials:* Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

*Hazardous decomposition products:* Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

*Hazardous polymerization:* Major components of this mixture show no hazardous polymerization.

*Conditions to Avoid:* Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

1. Surfactant
2. Isopropyl Alcohol

#### TOXICITY

LD50 Oral – rat – 1,800 mg/kg  
LD50 Dermal – rabbit – 8,000 mg/kg  
LD50 Oral – rat – 5,045 mg/kg  
LC50 Inhalation – rat – 8 h- 18,000ppm LD50 Dermal – rabbit – 12,800 mg/kg

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

1. Surfactant
2. Isopropyl Alcohol

#### TOXICITY

LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h  
  
LC50 – Pimephales promelas(fat head minnow) – 9,640 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 5,102 mg/l – 48 h

## Safety Data Sheet

**Product Name:** Big Guns Spot Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

## Safety Data Sheet

**Product Name:** Big Guns Spot Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

**Product Name:** Citrus Boost

**Revision Date:** June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Citrus Boost

**Product Use:** Solvent Cleaner & Booster

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

### WARNING

**H227: Combustible liquid;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	2
Flammability hazard	2
Reactivity hazard	1
Other hazard	



## Safety Data Sheet

Product Name: Citrus Boost

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. D-LIMONENE	94266-47-4	10-50%
2. Petroleum Solvent	64742-48-9	10-50%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: Citrus Boost

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: Citrus Boost

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. D-LIMONENE	Not Established	165.5 (mg/m <sup>3</sup> )	Not Established
2. Petroleum Solvent	100ppm/525mg/m <sup>3</sup>	100ppm	350mg/m <sup>3</sup>

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Orange

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Orange

*pH:* N/A

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

**Product Name:** Citrus Boost

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

*Chemical Stability:* Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

*Conditions to avoid:* Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

*Incompatibility with other materials:* Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

*Hazardous decomposition products:* Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

*Hazardous polymerization:* Major components of this mixture show no hazardous polymerization.

*Conditions to Avoid:* Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. D-LIMONENE	LD50 Oral - rat - 4400 mg/kg LD50 Dermal - rat - >5000 mg/kg
2. Petroleum Solvent	Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. D-LIMONENE	Not Established
2. Petroleum Solvent	Not Established

## Safety Data Sheet

Product Name: Citrus Boost

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. D-Limonene
2. Petroleum Solvent

#### REGULATION

Not Established

OSHA Hazards: Combustible Liquid SARA 311/312 Hazards: Fire Hazard PA  
& NJ Right To Know Components: Alkanes, C10-13-iso-CASNo.68551-17-7

## Safety Data Sheet

**Product Name:** Citrus Boost

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

**Product Name:** Citrus Force

**Revision Date:** June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Citrus Force

**Product Use:** Pre Spray Cleaning

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

### WARNING

**H227: Combustible liquid;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

Product Name: Citrus Force

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1.SODIUM CARBOANTE	497-19-8	15-20%
2.LINEAR ALKYL BENZENE SULFONATE	68081-81-2	15-20%
3.SODIUM METASILLICATE	6834-92-0	10-20%
4.SODIUM TRIPHOLYPHOSATE	7758-29-4	10-70%
5.ETHER BUTYL	111-76-2	1-10%
6.SODIUM SULFATE	7757-82-6	5-10%
7.D-LIMONENE	94266-47-4	1-10%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: Citrus Force

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: Citrus Force

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1.SODIUM CARBOANTE	Not Established	Not Established	Not Established
2.LINEAR ALKYL BENZENE SULFONATE	Not Established	Not Established	Not Established
3.SODIUM METASILICATE	2mg/m3	2mg/m3	Not Established
4.SODIUM TRIPHOLYPHOSATE	Not Established	Not Established	Not Established
5.ETHER BUTYL	25 ppm	25 ppm	50 ppm
6.SODIUM SULFATE	Not Established	Not Established	Not Established
7.D-LIMONENE	Not Established	165.5 (mg/m3)	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Powder

*Odor:* Orange

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* White/Yellow

*pH:* 12.5-13

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: Citrus Force

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. LINEAR ALKYL BENZENE SULFONATE	Not Established
3. SODIUM SULFATE	Not Established
4. D-LIMONENE	LD50 Oral - rat - 4400 mg/kg LD50 Dermal - rat - >5000 mg/kg
5. Sodium Tripolyphosphate	LD50 Oral - rat - 3100 mg/kg LD50 Dermal - rabbit - 4640 mg/kg
6. Sodium Metasilicate	LD50 Oral - rat - 1,153 mg/kg      Skin - rabbit - Severe skin irritation - 24 h
7. Glycol Ether EB	LD50 Oral - rat - 470 mg/kg      LC50 Inhalation - rat - 4 h - 450 ppm LD50 Dermal - rabbit - 220 mg/kg Eyes - rabbit - Moderate eye irritation - 24 h

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. LINEAR ALKYL BENZENE SULFONATE	Not Established
3. SODIUM SULFATE	Not Established
4. D-LIMONENE	Not Established
5. Sodium Tripolyphosphate	Toxicity to fish LC50-freshwater fish-1650 mg/l-48 h
6. Sodium Metasilicate	Not Established
7. Glycol Ether EB	Toxicity to fish LC50-other fish-220 mg/l-96 h Toxicity to daphnia and other aquatic invertebrates EC50-Daphnia magna (Water flea)-1,815 mg/l-24 h

## Safety Data Sheet

Product Name: Citrus Force

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Sodium Tripolyphosphate
2. SODIUM CARBOANTE
3. Sodium Metasilicate

#### REGULATION

Not Established

Not Established

**OSHA Hazards:** Harmful by Ingestion; Corrosive

**SARA 311/312 Hazards:** Acute Health Hazard

**MA, PA, and NJ Right to Know:** Disodium metasilicate CAS-No.6834-92-0

Not Established

4. LINEAR ALKYL BENZENE SULFONATE

5. Glycol Ether EB

**OSHA Hazards :** Combustible Liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Irritant, Carcinogen

**SARA 313 Components:** 2-Butoxyethanol CAS-No.111-76-2

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**MA, PA, and NJ Right to Know:** 2-Butoxyethanol CAS-No.111-76-2

6. SODIUM SULFATE

Not Established

7. D-Limonene

Not Established

## Safety Data Sheet

**Product Name:** Citrus Force

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: Citrus Gel

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Citrus Gel

**Product Use:** Spot Remover

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

#### WARNING

**H227: Combustible liquid;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

Product Name: Citrus Gel

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1.LINEAR ALKYL BENZENE SULFONATE	68081-81-2	15-20%
2.SODIUM METASILICATE	6834-92-0	10-20%
3.D-LIMONENE	94266-47-4	10-45%
4.TETRASODIUM SALT	7722-88-5	15-20%
5.METHOXY PROPANOL	108-65-6	30-40%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: Citrus Gel

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: Citrus Gel

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1.LINEAR ALKYL BENZENE SULFONATE	Not Established	Not Established	Not Established
2.SODIUM METASILICATE	2mg/m3	2mg/m3	Not Established
3.SODIUM TRIPHOLYPHOSATE	Not Established	Not Established	Not Established
4.D-LIMONENE	Not Established	165.5 (mg/m3)	Not Established
5.METHOXY PROPANOL	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Gel

*Odor:* Orange

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Clear/White

*pH:* 10.5

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: Citrus Gel

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. LINEAR ALKYL BENZENE SULFONATE	Not Established
2. D-LIMONENE	LD50 Oral - rat - 4400 mg/kg LD50 Dermal - rat - >5000 mg/kg
3. Sodium Tripolyphosphate	LD50 Oral - rat - 3100 mg/kg LD50 Dermal - rabbit - 4640 mg/kg
4. Sodium Metasilicate	LD50 Oral - rat – 1,153 mg/kg      Skin - rabbit – Severe skin irritation - 24 h
5. METHOXY PROPANOL	Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. LINEAR ALKYL BENZENE SULFONATE	Not Established
2. D-LIMONENE	Not Established
3. Sodium Tripolyphosphate	Toxicity to fish LC50-freshwater fish-1650 mg/l-48 h
4. Sodium Metasilicate	Not Established
5. METHOXY PROPANOL	Not Established

## Safety Data Sheet

Product Name: Citrus Gel

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Sodium Tripolyphosphate
2. Sodium Metasilicate

#### REGULATION

Not Established

**OSHA Hazards:** Harmful by Ingestion; Corrosive

**SARA 311/312 Hazards:** Acute Health Hazard

**MA, PA, and NJ Right to Know:** Disodium metasilicate CAS-No.6834-92-0

3. LINEAR ALKYL BENZENE SULFONATE
4. D-Limonene
5. METHOXY PROPANOL

Not Established

Not Established

Not Established

## Safety Data Sheet

**Product Name:** Citrus Gel

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

**Product Name:** Clean and Soft Fiber Rinse

**Revision Date:** June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Clean and Soft Fiber Rinse

**Product Use:** Rinse Aid

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	1
Flammability hazard	2
Reactivity hazard	1
Other hazard	



## Safety Data Sheet

**Product Name:** Clean and Soft Fiber Rinse

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. Isopropyl Alcohol	67-63-0	10-20%
3. Citric Acid	77-92-9	10-30%
4. ETHER BUTYL	111-76-2	1-10%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

**Product Name:** Clean and Soft Fiber Rinse

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 6 ACCIDENTAL RELEASE MEASURES

#### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

#### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

#### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

### SECTION 7 HANDLING AND STORAGE

#### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

#### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

**Product Name:** Clean and Soft Fiber Rinse

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Isopropyl Alcohol	500ppm	200 ppm	400ppm
3. Citric Acid	not established	not established	not established
4. ETHER BUTYL	25 ppm	25 ppm	50 ppm

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Fresh Linen

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 3.00

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

**Product Name:** Clean and Soft Fiber Rinse

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                      |  |
|----------------------|--|
| 1. Surfactant        | LD50 Oral – rat – 1,800 mg/kg<br>LD50 Dermal – rabbit – 8,000 mg/kg  |
| 2. Isopropyl Alcohol | LD50 Oral – rat – 5,045 mg/kg<br>LC50 Inhalation – rat – 8 h- 18,000ppm LD50 Dermal – rabbit – 12,800 mg/kg  |
| 3. Citric Acid       | Not Established  |
| 4. Glycol Ether EB   | LD50 Oral - rat - 470 mg/kg      LC50 Inhalation - rat - 4 h - 450 ppm<br>LD50 Dermal - rabbit - 220 mg/kg<br>Eyes - rabbit - Moderate eye irritation - 24 |

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                      |  |
|----------------------|--|
| 1. Surfactant        | LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h                               |
| 2. Isopropyl Alcohol | LC50 – Pimephales promelas(fat head minnow) – 9,640 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 5,102 mg/l – 48 h                          |
| 3. Citric Acid       | Not Established  |
| 4. Glycol Ether EB   | Toxicity to fish LC50-other fish-220 mg/l-96 h<br>Toxicity to daphnia and other aquatic invertebrates<br>EC50-Daphnia magna (Water flea)-1,815 mg/l-24 h |

## Safety Data Sheet

**Product Name:** Clean and Soft Fiber Rinse

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Surfactant
2. Isopropyl Alcohol
3. Citric Acid
4. Glycol Ether EB

#### REGULATION

not established  
not established  
not established

**OSHA Hazards :** Combustible Liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Irritant, Carcinogen

**SARA 313 Components:** 2-Butoxyethanol CAS-No.111-76-2

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**MA, PA, and NJ Right to Know:** 2-Butoxyethanol CAS-No.111-76-2

## Safety Data Sheet

**Product Name:** Clean and Soft Fiber Rinse

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: Cyclone

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Cyclone

**Product Use:** Carpet Cleaner

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

#### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	1
Flammability hazard	1
Reactivity hazard	1
Other hazard	



## Safety Data Sheet

Product Name: Cyclone

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Proprietary Blend of Surfactants	9002-93-2	20-65%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: Cyclone

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: Cyclone

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Proprietary Blend of Surfactants	not established	not established	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Orange

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 11.00

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: Cyclone

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

*Chemical Stability:* Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

*Conditions to avoid:* Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

*Incompatibility with other materials:* Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

*Hazardous decomposition products:* Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

*Hazardous polymerization:* Major components of this mixture show no hazardous polymerization.

*Conditions to Avoid:* Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

1. Proprietary Blend of Surfactants

#### TOXICITY

LD50 Oral – rat – 1,800 mg/kg

LD50 Dermal – rabbit – 8,000 mg/kg

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

1. Proprietary Blend of Surfactants

#### TOXICITY

LC50 – Pimephales promelas (fat head minnow) – 8.9 mg/l-96.0h ED50 –  
Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h

## Safety Data Sheet

Product Name: Cyclone

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Proprietary Blend of Surfactants

#### REGULATION

not established

## Safety Data Sheet

Product Name: Cyclone

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: EOC CM

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** ENZYME ODOR COUNTERACTANT CUCUMBER MELON

**Product Use:** Deodorizer

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

#### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	1
Flammability hazard	2
Reactivity hazard	0
Other hazard	



## Safety Data Sheet

Product Name: EOC CM

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. Isopropyl Alcohol	67-63-0	10-20%
3. Fragrance – Cucumber Melon	not established	10-25%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: EOC CM

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: EOC CM

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Isopropyl Alcohol	500ppm	200 ppm	400ppm
3. Fragrance – Cucumber Melon	not established	not established	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Cucumber Melon

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 6.5-7

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: EOC CM

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                               |   |
|-------------------------------|---|
| 1. Surfactant                 | LD50 Oral – rat – 1,800 mg/kg<br>LD50 Dermal – rabbit – 8,000 mg/kg   |
| 2. Isopropyl Alcohol          | LD50 Oral – rat – 5,045 mg/kg<br>LC50 Inhalation – rat – 8 h- 18,000ppm LD50 Dermal – rabbit – 12,800 mg/kg |
| 3. Fragrance – Cucumber Melon | not established   |

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                               |   |
|-------------------------------|---|
| 1. Surfactant                 | LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h      |
| 2. Isopropyl Alcohol          | LC50 – Pimephales promelas(fat head minnow) – 9,640 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 5,102 mg/l – 48 h |
| 3. Fragrance – Cucumber Melon | not established   |

## Safety Data Sheet

Product Name: EOC CM

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

## Safety Data Sheet

Product Name: EOC CM

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: EOC FL

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** ENZYME ODOR COUNTERACTANT FRESH LINEN

**Product Use:** Deodorizer

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

#### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	1
Flammability hazard	2
Reactivity hazard	0
Other hazard	



## Safety Data Sheet

Product Name: EOC FL

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. Isopropyl Alcohol	67-63-0	10-20%
3. Fragrance – Fresh Linen	not established	10-25%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: EOC FL

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: EOC FL

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Isopropyl Alcohol	500ppm	200 ppm	400ppm
3. Fragrance – Fresh Linen	not established	not established	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Fresh Linen

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 6.5-7

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: EOC FL

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                            |   |
|----------------------------|---|
| 1. Surfactant              | LD50 Oral – rat – 1,800 mg/kg<br>LD50 Dermal – rabbit – 8,000 mg/kg   |
| 2. Isopropyl Alcohol       | LD50 Oral – rat – 5,045 mg/kg<br>LC50 Inhalation – rat – 8 h- 18,000ppm LD50 Dermal – rabbit – 12,800 mg/kg |
| 3. Fragrance – Fresh Linen | not established   |

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                            |   |
|----------------------------|---|
| 1. Surfactant              | LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h      |
| 2. Isopropyl Alcohol       | LC50 – Pimephales promelas(fat head minnow) – 9,640 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 5,102 mg/l – 48 h |
| 3. Fragrance – Fresh Linen | not established   |

## Safety Data Sheet

Product Name: EOC FL

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

## Safety Data Sheet

Product Name: EOC FL

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: FLORAL

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** ENZYME ODOR COUNTERACTANT FLORAL

**Product Use:** Deodorizer

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

#### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	1
Flammability hazard	2
Reactivity hazard	0
Other hazard	



## Safety Data Sheet

Product Name: FLORAL

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. Isopropyl Alcohol	67-63-0	10-20%
3. Fragrance – Floral	not established	10-25%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: FLORAL

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## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: FLORAL

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Isopropyl Alcohol	500ppm	200 ppm	400ppm
3. Fragrance – Floral	not established	not established	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Floral

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 6.5-7

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: FLORAL

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### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                       |   |
|-----------------------|---|
| 1. Surfactant         | LD50 Oral – rat – 1,800 mg/kg<br>LD50 Dermal – rabbit – 8,000 mg/kg   |
| 2. Isopropyl Alcohol  | LD50 Oral – rat – 5,045 mg/kg<br>LC50 Inhalation – rat – 8 h- 18,000ppm LD50 Dermal – rabbit – 12,800 mg/kg |
| 3. Fragrance – Floral | not established   |

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                       |   |
|-----------------------|---|
| 1. Surfactant         | LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h      |
| 2. Isopropyl Alcohol  | LC50 – Pimephales promelas(fat head minnow) – 9,640 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 5,102 mg/l – 48 h |
| 3. Fragrance – Floral | not established   |

## Safety Data Sheet

Product Name: FLORAL

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

## Safety Data Sheet

Product Name: FLORAL

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### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: EOC OE

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** ENZYME ODOR COUNTERACTANT ORANGE ESSENCE

**Product Use:** Deodorizer

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

#### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	1
Flammability hazard	2
Reactivity hazard	0
Other hazard	



## Safety Data Sheet

Product Name: EOC OE

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. Isopropyl Alcohol	67-63-0	10-20%
3. Fragrance – Orange Essence	not established	10-25%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: EOC OE

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: EOC OE

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Isopropyl Alcohol	500ppm	200 ppm	400ppm
3. Fragrance – Orange Essence	not established	not established	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Orange Essence

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 6.5-7

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: EOC OE

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                               |   |
|-------------------------------|---|
| 1. Surfactant                 | LD50 Oral – rat – 1,800 mg/kg<br>LD50 Dermal – rabbit – 8,000 mg/kg   |
| 2. Isopropyl Alcohol          | LD50 Oral – rat – 5,045 mg/kg<br>LC50 Inhalation – rat – 8 h- 18,000ppm LD50 Dermal – rabbit – 12,800 mg/kg |
| 3. Fragrance – Orange Essence | not established   |

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                               |   |
|-------------------------------|---|
| 1. Surfactant                 | LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h      |
| 2. Isopropyl Alcohol          | LC50 – Pimephales promelas(fat head minnow) – 9,640 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 5,102 mg/l – 48 h |
| 3. Fragrance – Orange Essence | not established   |

## Safety Data Sheet

Product Name: EOC OE

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

## Safety Data Sheet

Product Name: EOC OE

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

Product Name: EOC PC

Revision Date: June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** ENZYME ODOR COUNTERACTANT PINEAPPLE CILANTRO

**Product Use:** Deodorizer

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	1
Flammability hazard	2
Reactivity hazard	0
Other hazard	



## Safety Data Sheet

Product Name: EOC PC

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. Isopropyl Alcohol	67-63-0	10-20%
3. Fragrance – Pineapple Cilantro	not established	10-25%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: EOC PC

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: EOC PC

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Isopropyl Alcohol	500ppm	200 ppm	400ppm
3. Fragrance – Pineapple Cilantro	not established	not established	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Pineapple Cilantro

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 6.5-7

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: EOC PC

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                                   |   |
|-----------------------------------|---|
| 1. Surfactant                     | LD50 Oral – rat – 1,800 mg/kg<br>LD50 Dermal – rabbit – 8,000 mg/kg   |
| 2. Isopropyl Alcohol              | LD50 Oral – rat – 5,045 mg/kg<br>LC50 Inhalation – rat – 8 h- 18,000ppm LD50 Dermal – rabbit – 12,800 mg/kg |
| 3. Fragrance – Pineapple Cilantro | not established   |

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                                   |   |
|-----------------------------------|---|
| 1. Surfactant                     | LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h      |
| 2. Isopropyl Alcohol              | LC50 – Pimephales promelas(fat head minnow) – 9,640 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 5,102 mg/l – 48 h |
| 3. Fragrance – Pineapple Cilantro | not established   |

## Safety Data Sheet

Product Name: EOC PC

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below.

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number.

## Safety Data Sheet

Product Name: EOC PC

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

Product Name: OxyBoost

Revision Date: June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** OxyBoost

**Product Use:** Cleaning & Booster

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Oxidizing Solids (Category 2)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 5)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 1)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

**DANGER**

**H272 May intensify fire; oxidizer**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H318 Causes serious eye damage;**

**H227: Combustible liquid.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	OX



## Safety Data Sheet

Product Name: OxyBoost

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1.SODIUM CARBOANTE	497-19-8	15-20%
2.LINEAR ALKYL BENZENE SULFONATE	68081-81-2	15-20%
3.SODIUM TRIPHOLYPHOSATE	7758-29-4	10-70%
4.ETHER BUTYL	111-76-2	1-10%
5.SODIUM SULFATE	7757-82-6	5-10%
6.Sodium Percarbonate	15630-89-4	10-40%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: OxyBoost

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: OxyBoost

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1.SODIUM CARBOANTE	Not Established	Not Established	Not Established
2.LINEAR ALKYL BENZENE SULFONATE	Not Established	Not Established	Not Established
3.SODIUM TRIPHOLYPHOSATE	Not Established	Not Established	Not Established
4.ETHER BUTYL	25 ppm	25 ppm	50 ppm
5.SODIUM SULFATE	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Powder

*Odor:* Desert Rain

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* White

*pH:* 12.5-13

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: OxyBoost

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. LINEAR ALKYL BENZENE SULFONATE	Not Established
3. SODIUM SULFATE	Not Established
4. Sodium Tripolyphosphate	LD50 Oral - rat - 3100 mg/kg LD50 Dermal - rabbit - 4640 mg/kg
5. Glycol Ether EB	LD50 Oral - rat - 470 mg/kg      LC50 Inhalation - rat - 4 h - 450 ppm LD50 Dermal - rabbit - 220 mg/kg Eyes - rabbit - Moderate eye irritation - 24 h
6. Sodium Percarbonate	Oral LD50 LD50 Oral - rat - 1,034 mg/kg Inhalation LC50 no data available Dermal LD50    LD50 Dermal - rabbit - > 2,000 mg/kg

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. LINEAR ALKYL BENZENE SULFONATE	Not Established
3. SODIUM SULFATE	Not Established
4. Sodium Tripolyphosphate	Toxicity to fish LC50-freshwater fish-1650 mg/l-48 h Toxicity to fish LC50-other fish-220 mg/l-96 h
5. Glycol Ether EB	Toxicity to daphnia and other aquatic invertebrates EC50-Daphnia magna (Water flea)-1,815 mg/l-24 h
6. Sodium Percarbonate	Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 70.7 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates EC0 - Daphnia magna (Water flea) - 2 mg/l - 48 h EC50 - Daphnia magna (Water flea) - 4.9 mg/l - 48 h

## Safety Data Sheet

Product Name: OxyBoost

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

#### DOT (US)

Proper Shipping Name Consumer commodity

Hazard Class ORM-D

Description Consumer commodity, ORM-D

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

#### COMPONENT

1. Sodium Tripolyphosphate
2. SODIUM CARBOANTE
3. LINEAR ALKYL BENZENE SULFONATE
4. Glycol Ether EB

#### REGULATION

Not Established

Not Established

Not Established

**OSHA Hazards** : Combustible Liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Irritant, Carcinogen

**SARA 313 Components**: 2-Butoxyethanol CAS-No.111-76-2

**SARA 311/312 Hazards**: Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**MA, PA, and NJ Right to Know**: 2-Butoxyethanol CAS-No.111-76-2

Not Established

5. SODIUM SULFATE

6. Sodium Percarbonate

#### Pennsylvania Right To Know Components

Disodium carbonate, compound with hydrogen peroxide (2:3) CAS-No.15630-89-4

#### New Jersey Right To Know Components

Disodium carbonate, compound with hydrogen peroxide (2:3) CAS-No.15630-89-4

#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## Safety Data Sheet

Product Name: OxyBoost

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

Product Name: OxyForce

Revision Date: June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** OxyForce

**Product Use:** Pre Spray Spotter & Booster

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Oxidizing Solids (Category 2)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 5)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 1)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

**DANGER**

**H272 May intensify fire; oxidizer**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H318 Causes serious eye damage;**

**H227: Combustible liquid.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	OX



## Safety Data Sheet

Product Name: OxyForce

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1.SODIUM CARBOANTE	497-19-8	15-20%
2.LINEAR ALKYL BENZENE SULFONATE	68081-81-2	15-20%
3.SODIUM METASILLICATE	6834-92-0	10-20%
4.SODIUM TRIPHOLYPHOSATE	7758-29-4	10-70%
5.ETHER BUTYL	111-76-2	1-10%
6.SODIUM SULFATE	7757-82-6	5-10%
7.Sodium Percarbonate	15630-89-4	10-40%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: OxyForce

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: OxyForce

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1.SODIUM CARBOANTE	Not Established	Not Established	Not Established
2.LINEAR ALKYL BENZENE SULFONATE	Not Established	Not Established	Not Established
3.SODIUM METASILICATE	2mg/m3	2mg/m3	Not Established
4.SODIUM TRIPHOLYPHOSATE	Not Established	Not Established	Not Established
5.ETHER BUTYL	25 ppm	25 ppm	50 ppm
6.SODIUM SULFATE	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Powder

*Odor:* Mint

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* White

*pH:* 12

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: OxyForce

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. LINEAR ALKYL BENZENE SULFONATE	Not Established
3. SODIUM SULFATE	Not Established
4. Sodium Tripolyphosphate	LD50 Oral - rat - 3100 mg/kg LD50 Dermal - rabbit - 4640 mg/kg
5. Sodium Metasilicate	LD50 Oral - rat - 1,153 mg/kg      Skin - rabbit - Severe skin irritation - 24 h
6. Glycol Ether EB	LD50 Oral - rat - 470 mg/kg      LC50 Inhalation - rat - 4 h - 450 ppm LD50 Dermal - rabbit - 220 mg/kg Eyes - rabbit - Moderate eye irritation - 24 h
7. Sodium Percarbonate	Oral LD50 LD50 Oral - rat - 1,034 mg/kg Inhalation LC50 no data available Dermal LD50    LD50 Dermal - rabbit - > 2,000 mg/kg

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. LINEAR ALKYL BENZENE SULFONATE	Not Established
3. SODIUM SULFATE	Not Established
4. Sodium Tripolyphosphate	Toxicity to fish LC50-freshwater fish-1650 mg/l-48 h
5. Sodium Metasilicate	Not Established
6. Glycol Ether EB	Toxicity to fish LC50-other fish-220 mg/l-96 h Toxicity to daphnia and other aquatic invertebrates EC50-Daphnia magna (Water flea)-1,815 mg/l-24 h
7. Sodium Percarbonate	Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 70.7 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates EC0 - Daphnia magna (Water flea) - 2 mg/l - 48 h EC50 - Daphnia magna (Water flea) - 4.9 mg/l - 48 h

## Safety Data Sheet

Product Name: OxyForce

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

#### DOT (US)

Proper Shipping Name Consumer commodity

Hazard Class ORM-D

Description Consumer commodity, ORM-D

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

#### COMPONENT

1. Sodium Tripolyphosphate
2. SODIUM CARBOANTE
3. Sodium Metasilicate

#### REGULATION

Not Established

Not Established

**OSHA Hazards:** Harmful by Ingestion; Corrosive

**SARA 311/312 Hazards:** Acute Health Hazard

**MA, PA, and NJ Right to Know:** Disodium metasilicate CAS-No.6834-92-0

Not Established

**OSHA Hazards :** Combustible Liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Irritant, Carcinogen

**SARA 313 Components:** 2-Butoxyethanol CAS-No.111-76-2

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**MA, PA, and NJ Right to Know:** 2-Butoxyethanol CAS-No.111-76-2

Not Established

4. LINEAR ALKYL BENZENE SULFONATE
5. Glycol Ether EB

6. SODIUM SULFATE

7. Sodium Percarbonate

#### Pennsylvania Right To Know Components

Disodium carbonate, compound with hydrogen peroxide (2:3) CAS-No.15630-89-4

#### New Jersey Right To Know Components

Disodium carbonate, compound with hydrogen peroxide (2:3) CAS-No.15630-89-4

#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## Safety Data Sheet

Product Name: OxyForce

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: PLUM BLOSSOM

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** PLUM BLOSSOM DEODORIZER

**Product Use:** Deodorizer

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

#### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	1
Flammability hazard	2
Reactivity hazard	0
Other hazard	



## Safety Data Sheet

Product Name: PLUM BLOSSOM

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. Isopropyl Alcohol	67-63-0	10-20%
3. Fragrance – PLUM BLOSSOM	not established	10-25%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: PLUM BLOSSOM

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: PLUM BLOSSOM

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Isopropyl Alcohol	500ppm	200 ppm	400ppm
3. Fragrance – Plum Blossom	not established	not established	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Plum Blossom

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 6.5-7

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: PLUM BLOSSOM

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                             |   |
|-----------------------------|---|
| 1. Surfactant               | LD50 Oral – rat – 1,800 mg/kg<br>LD50 Dermal – rabbit – 8,000 mg/kg   |
| 2. Isopropyl Alcohol        | LD50 Oral – rat – 5,045 mg/kg<br>LC50 Inhalation – rat – 8 h- 18,000ppm LD50 Dermal – rabbit – 12,800 mg/kg |
| 3. Fragrance – Plum Blossom | not established   |

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

- |                             |   |
|-----------------------------|---|
| 1. Surfactant               | LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h      |
| 2. Isopropyl Alcohol        | LC50 – Pimephales promelas(fat head minnow) – 9,640 mg/l-96.0h ED50 – Daphnia (other aquatic invertebrates) – 5,102 mg/l – 48 h |
| 3. Fragrance – Plum Blossom | not established   |

## Safety Data Sheet

Product Name: PLUM BLOSSOM

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

## Safety Data Sheet

**Product Name:** PLUM BLOSSOM

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

**Product Name:** Powder Defoamer

**Revision Date:** June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Powder Defoamer

**Product Use:** Defoamer

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

### WARNING

**H227: Combustible liquid;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

**Product Name:** Powder Defoamer

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1.SODIUM CARBOANTE	497-19-8	15-20%
2. Polydimethyldiphenyl siloxane copolymer	63148-62-9	15-20%
3. Sodium Chloride	7647-14-5	10-20%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

**Product Name:** Powder Defoamer

**Revision Date:** June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

**Product Name:** Powder Defoamer

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1.SODIUM CARBOANTE	Not Established	Not Established	Not Established
2. Polydimethyldiphenyl siloxane copolymer	Not Established	Not Established	Not Established
3.Sodium Chloride	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Powder

*Odor:* Distinct

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* White

*pH:* 9

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

**Product Name:** Powder Defoamer

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. Polydimethyldiphenyl siloxane copolymer	Not Established
3. Sodium Chloride	Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. Polydimethyldiphenyl siloxane copolymer	Not Established
3. Sodium Chloride	Not Established

## Safety Data Sheet

**Product Name:** Powder Defoamer

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

COMPONENT	REGULATION
1. SODIUM CARBOANTE	Not Established
2. Polydimethyldiphenyl siloxane copolymer	Not Established
3. Sodium Chloride	Not Established

## Safety Data Sheet

**Product Name:** Powder Defoamer

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

**Product Name:** Powder Pre Spray

**Revision Date:** June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Powder Pre Spray

**Product Use:** Pre Spray Cleaning

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

### WARNING

**H227: Combustible liquid;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

**Product Name:** Powder Pre Spray

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1.SODIUM CARBOANTE	497-19-8	15-20%
2.LINEAR ALKYL BENZENE SULFONATE	68081-81-2	15-20%
3.SODIUM METASILLICATE	6834-92-0	10-20%
4.SODIUM TRIPHOLYPHOSATE	7758-29-4	10-70%
5.ETHER BUTYL	111-76-2	1-10%
6.SODIUM SULFATE	7757-82-6	5-10%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

**Product Name:** Powder Pre Spray

**Revision Date:** June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

**Product Name:** Powder Pre Spray

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1.SODIUM CARBOANTE	Not Established	Not Established	Not Established
2.LINEAR ALKYL BENZENE SULFONATE	Not Established	Not Established	Not Established
3.SODIUM METASILLICATE	2mg/m3	2mg/m3	Not Established
4.SODIUM TRIPHOLYPHOSATE	Not Established	Not Established	Not Established
5.ETHER BUTYL	25 ppm	25 ppm	50 ppm
6.SODIUM SULFATE	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Powder

*Odor:* Fresh

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* White

*pH:* 12.5

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

**Product Name:** Powder Pre Spray

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. LINEAR ALKYL BENZENE SULFONATE	Not Established
3. SODIUM SULFATE	Not Established
4. Sodium Tripolyphosphate	LD50 Oral - rat - 3100 mg/kg LD50 Dermal - rabbit - 4640 mg/kg
5. Sodium Metasilicate	LD50 Oral - rat - 1,153 mg/kg      Skin - rabbit - Severe skin irritation - 24 h
6. Glycol Ether EB	LD50 Oral - rat - 470 mg/kg      LC50 Inhalation - rat - 4 h - 450 ppm LD50 Dermal - rabbit - 220 mg/kg Eyes - rabbit - Moderate eye irritation - 24 h

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. LINEAR ALKYL BENZENE SULFONATE	Not Established
3. SODIUM SULFATE	Not Established
4. Sodium Tripolyphosphate	Toxicity to fish LC50-freshwater fish-1650 mg/l-48 h
5. Sodium Metasilicate	Not Established
6. Glycol Ether EB	Toxicity to fish LC50-other fish-220 mg/l-96 h Toxicity to daphnia and other aquatic invertebrates EC50-Daphnia magna (Water flea)-1,815 mg/l-24 h

## Safety Data Sheet

**Product Name:** Powder Pre Spray

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Sodium Tripolyphosphate
2. SODIUM CARBOANTE
3. Sodium Metasilicate

#### REGULATION

Not Established

Not Established

**OSHA Hazards:** Harmful by Ingestion; Corrosive

**SARA 311/312 Hazards:** Acute Health Hazard

**MA, PA, and NJ Right to Know:** Disodium metasilicate CAS-No.6834-92-0

Not Established

4. LINEAR ALKYL BENZENE SULFONATE
5. Glycol Ether EB

**OSHA Hazards :** Combustible Liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Irritant, Carcinogen

**SARA 313 Components:** 2-Butoxyethanol CAS-No.111-76-2

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**MA, PA, and NJ Right to Know:** 2-Butoxyethanol CAS-No.111-76-2

6. SODIUM SULFATE

Not Established

## Safety Data Sheet

**Product Name:** Powder Pre Spray

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

Product Name: Powerzyme

Revision Date: June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Powerzyme

**Product Use:** Pre Spray Spotter & Booster

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

### WARNING

**H227: Combustible liquid;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

Product Name: Powerzyme

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1.SODIUM METASILICATE	6834-92-0	10-20%
2.SODIUM TRIPHOLYPHOSATE	7758-29-4	10-70%
3.ETHER BUTYL	111-76-2	1-10%
4. Proprietary Enzyme and Surfactant Blend	Not Established	5-25%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: Powerzyme

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: Powerzyme

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1.SODIUM METASILLICATE	2mg/m3	2mg/m3	Not Established
2.SODIUM TRIPHOLYPHOSATE	Not Established	Not Established	Not Established
3.ETHER BUTYL	25 ppm	25 ppm	50 ppm
4.Proprietary Enzyme and Surfactant Blend	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Gel Liquid

*Odor:* Country Fresh

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 12.00

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: Powerzyme

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. Sodium Tripolyphosphate	LD50 Oral - rat - 3100 mg/kg LD50 Dermal - rabbit - 4640 mg/kg
2. Sodium Metasilicate	LD50 Oral - rat - 1,153 mg/kg      Skin - rabbit - Severe skin irritation - 24 h
3. Glycol Ether EB	LD50 Oral - rat - 470 mg/kg      LC50 Inhalation - rat - 4 h - 450 ppm LD50 Dermal - rabbit - 220 mg/kg Eyes - rabbit - Moderate eye irritation - 24 h
4. Proprietary Enzyme and Surfactant Blend	Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. Sodium Tripolyphosphate	Toxicity to fish LC50-freshwater fish-1650 mg/l-48 h
2. Sodium Metasilicate	Not Established
3. Glycol Ether EB	Toxicity to fish LC50-other fish-220 mg/l-96 h Toxicity to daphnia and other aquatic invertebrates EC50-Daphnia magna (Water flea)-1,815 mg/l-24 h
4. Proprietary Enzyme and Surfactant Blend	Not Established

## Safety Data Sheet

Product Name: Powerzyme

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Sodium Tripolyphosphate
2. Sodium Metasilicate

#### REGULATION

Not Established

**OSHA Hazards:** Harmful by Ingestion; Corrosive

**SARA 311/312 Hazards:** Acute Health Hazard

**MA, PA, and NJ Right to Know:** Disodium metasilicate CAS-No.6834-92-0

3. Glycol Ether EB

**OSHA Hazards :** Combustible Liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Irritant, Carcinogen

**SARA 313 Components:** 2-Butoxyethanol CAS-No.111-76-2

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**MA, PA, and NJ Right to Know:** 2-Butoxyethanol CAS-No.111-76-2

4. Proprietary Enzyme and Surfactant Blend

Not Established

## Safety Data Sheet

**Product Name:** Powerzyme

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: Quat EPA

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Quat EPA

**Product Use:** Cleaner and Disinfectant

EPA REG No. 1839-166-85781 EPA EST No. 85781-AZ-001

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

#### WARNING

**H227: Combustible liquid;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	1
Other hazard	



## Safety Data Sheet

Product Name: Quat EPA

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1.Tetrasodium ethylenediaminetetraacetate	64-02-8 5-10	5-10%
2.Nonylphenol polyoxyethylene	9016-45-9 1-3	1-3%
3.CITRIC ACID	77-92-9 0-1	0-1%
4.Dimethyl benzyl ammonium chloride	68424-85-1 4.339	4.339%
5.Octyldecyl dimethyl ammonium chloride	68424-95-3 3.255	3.255%
6.Dioctyl dimethyl ammonium chloride	5538-94-3 1.628	1.628%
7.Didecyl dimethyl ammonium chloride	7173-51-5 1.628	1.628%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: Quat EPA

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: Quat EPA

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1.Tetrasodium ethylenediaminetetraacetate	Not Established	Not Established	Not Established
2.Nonylphenol polyoxyethylene	Not Established	Not Established	Not Established
3.CITRIC ACID	Not Established	Not Established	Not Established
4.Dimethyl benzyl ammonium chloride	Not Established	Not Established	Not Established
5.Octyldecyl dimethyl ammonium chloride	Not Established	Not Established	Not Established
6.Dioctyl dimethyl ammonium chloride	Not Established	Not Established	Not Established
7.Didecyl dimethyl ammonium chloride	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Lemon

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 6.6

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: Quat EPA

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1.Tetrasodium ethylenediaminetetraacetate	Not Established
2.Nonylphenol polyoxyethylene	Not Established
3.CITRIC ACID	Not Established
4.Dimethyl benzyl ammonium chloride	Not Established
5.Octyldecyl dimethyl ammonium chloride	Not Established
6.Dioctyl dimethyl ammonium chloride	Not Established
7.Didecyl dimethyl ammonium chloride	Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1.Tetrasodium ethylenediaminetetraacetate	Not Established
2.Nonylphenol polyoxyethylene	Not Established
3.CITRIC ACID	Not Established
4.Dimethyl benzyl ammonium chloride	Not Established
5.Octyldecyl dimethyl ammonium chloride	Not Established
6.Dioctyl dimethyl ammonium chloride	Not Established
7.Didecyl dimethyl ammonium chloride	Not Established

## Safety Data Sheet

Product Name: Quat EPA

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

COMPONENT	REGULATION
1.Tetrasodium ethylenediaminetetraacetate	Not Established
2.Nonylphenol polyoxyethylene	Not Established
3.CITRIC ACID	Not Established
4.Dimethyl benzyl ammonium chloride	Not Established
5.Octyldecyl dimethyl ammonium chloride	Not Established
6.Dioctyl dimethyl ammonium chloride	Not Established
7.Didecyl dimethyl ammonium chloride	Not Established

## Safety Data Sheet

Product Name: Quat EPA

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

**Product Name:** Red Stain Remover

**Revision Date:** June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Red Stain Remover

**Product Use:** Red Stain Remover

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H318 Causes serious eye damage.**

Health hazard	3
Flammability hazard	2
Reactivity hazard	3
Other hazard	



## Safety Data Sheet

**Product Name:** Red Stain Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Sodium Metabisulfite	7681-57-4	5-30%
2. Surfactant Blend	not established	5-20%
3. Ammonium Hydroxide	1336-21-6	5-35%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

**Product Name:** Red Stain Remover

**Revision Date:** June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

**Product Name:** Red Stain Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Sodium Metabisulfite	not established	not established	not established
2. Surfactant Blend	not established	not established	not established
3. Ammonium Hydroxide	not established	not established	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Ammonia

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Clear/Amber

*pH:* 13

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

**Product Name:** Red Stain Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

*Chemical Stability:* Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

*Conditions to avoid:* Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

*Incompatibility with other materials:* Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

*Hazardous decomposition products:* Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

*Hazardous polymerization:* Major components of this mixture show no hazardous polymerization.

*Conditions to Avoid:* Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. Sodium Metabisulfite	Not Established
2. Ammonium Hydroxide	Not Established
3. Surfactant Blend	Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. Sodium Metabisulfite	Not Established
2. Ammonium Hydroxide	Not Established
3. Surfactant Blend	Not Established

## Safety Data Sheet

**Product Name:** Red Stain Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

COMPONENT	REGULATION
1. Sodium Metabisulfite	Not Established
2. Ammonium Hydroxide	Not Established
3. Surfactant Blend	Not Established

## Safety Data Sheet

**Product Name:** Red Stain Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

**Product Name:** Restore Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Restore Tile Cleaner

**Product Use:** Tile Cleaner

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

**Product Name:** Restore Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. PHOSPHORIC ACID	7664-38-2	10-40%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

**Product Name:** Restore Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 6 ACCIDENTAL RELEASE MEASURES

#### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

#### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

#### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

### SECTION 7 HANDLING AND STORAGE

#### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

#### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

**Product Name:** Restore Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Phosphoric Acid	1mg/m3	1mg/m3	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Lemon

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber/Clear

*pH:* 2.00

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

**Product Name:** Restore Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

*Chemical Stability:* Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

*Conditions to avoid:* Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

*Incompatibility with other materials:* Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

*Hazardous decomposition products:* Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

*Hazardous polymerization:* Major components of this mixture show no hazardous polymerization.

*Conditions to Avoid:* Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

1. Surfactant
2. Phosphoric Acid

#### TOXICITY

LD50 Oral – rat – 1,800 mg/kg  
LD50 Dermal – rabbit – 8,000 mg/kg  
Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

1. Surfactant
2. Phosphoric Acid

#### TOXICITY

LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 –  
Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h

Not Established

## Safety Data Sheet

**Product Name:** Restore Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Surfactant
2. Phosphoric Acid

#### REGULATION

Not Established  
Not Established

## Safety Data Sheet

**Product Name:** Restore Tile Cleaner

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: Rust Remover

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Rust Remover

**Product Use:** Rust Remover

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

#### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	1
Other hazard	



## Safety Data Sheet

Product Name: Rust Remover

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. Ammonium Bifluoride	1341-49-47	10-40%
3. Citric Acid	77-92-9	10-30%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

**Product Name:** Rust Remover

**Revision Date:** June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: Rust Remover

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Ammonium Bifluoride	not established	not established	not established
3. Citric Acid	not established	not established	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Acidic

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber

*pH:* 3.0

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

**Product Name:** Rust Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

1. Surfactant
2. Ammonium Bifluoride
3. Citric Acid

#### TOXICITY

LD50 Oral – rat – 1,800 mg/kg  
LD50 Dermal – rabbit – 8,000 mg/kg  
Not Established  
Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

1. Surfactant
2. Ammonium Bifluoride
3. Citric Acid

#### TOXICITY

LC50 – Pimephales promelas (fat head minnow) – 8.9 mg/l-96.0h ED50 –  
Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h  
Not Established  
Not Established

## Safety Data Sheet

Product Name: Rust Remover

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Surfactant
2. Ammonium Bifluoride
3. Citric Acid

#### REGULATION

not established  
not established  
not established

## Safety Data Sheet

**Product Name:** Rust Remover

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** SOR

**Product Use:** Stain Remover/Cleaning

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Oxidizing Solids (Category 2)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 5)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 1)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

**DANGER**

**H272 May intensify fire; oxidizer**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H318 Causes serious eye damage;**

**H227: Combustible liquid.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	OX



## Safety Data Sheet

Product Name: SOR

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1.Sodium Percarbonate	15630-89-4	85-99%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: SOR

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric



## SECTION 8 EXPOSURE / PERSONAL PROTECTION

### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
No reportable components	Not established	Not established	Not established

### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Powder

*Odor:* Mint

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* White

*pH:* N/A

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: SOR

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

*Chemical Stability:* Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

*Conditions to avoid:* Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

*Incompatibility with other materials:* Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

*Hazardous decomposition products:* Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

*Hazardous polymerization:* Major components of this mixture show no hazardous polymerization.

*Conditions to Avoid:* Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

1. Sodium Percarbonate

#### TOXICITY

Oral LD50

LD50 Oral - rat - 1,034 mg/kg

Inhalation LC50

no data available

Dermal LD50 LD50 Dermal - rabbit - > 2,000 mg/kg

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

1. Sodium Percarbonate

#### TOXICITY

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 70.7 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC0 - Daphnia magna (Water flea) - 2 mg/l - 48 h

EC50 - Daphnia magna (Water flea) - 4.9 mg/l - 48 h

## Safety Data Sheet

Product Name: SOR

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

#### DOT (US)

Proper Shipping Name Consumer commodity

Hazard Class ORM-D

Description Consumer commodity, ORM-D

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

#### COMPONENT

1. Sodium Percarbonate

#### REGULATION

##### Pennsylvania Right To Know Components

Disodium carbonate, compound with hydrogen peroxide (2:3) CAS-No.15630-89-4

##### New Jersey Right To Know Components

Disodium carbonate, compound with hydrogen peroxide (2:3) CAS-No. 15630-89-4

#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## Safety Data Sheet

Product Name: SOR

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: Tidal Wave

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Tidal Wave

**Product Use:** Carpet Cleaning

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

#### WARNING

**H227: Combustible liquid;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H320: Causes eye irritation.**

Health hazard	2
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

Product Name: Tidal Wave

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1.SODIUM CARBOANTE	497-19-8	15-20%
2.LINEAR ALKYL BENZENE SULFONATE	68081-81-2	15-20%
3.SODIUM TRIPHOLYPHOSATE	7758-29-4	10-70%
4. DIETHYLENE GLYCOL ETHER	34590-94-8	1-10%
5. SODIUM SULFATE	7757-82-6	5-10%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: Tidal Wave

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: Tidal Wave

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1.SODIUM CARBOANTE	Not Established	Not Established	Not Established
2.LINEAR ALKYL BENZENE SULFONATE	Not Established	Not Established	Not Established
3.SODIUM TRIPHOLYPHOSATE	Not Established	Not Established	Not Established
4.DIETHYLENE GLYCOL ETHER	25 ppm	25 ppm	50 ppm
5.SODIUM SULFATE	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Powder

*Odor:* Fresh

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Blue

*pH:* 11.5

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: Tidal Wave

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. LINEAR ALKYL BENZENE SULFONATE	Not Established
3. SODIUM SULFATE	Not Established
4. Sodium Tripolyphosphate	LD50 Oral - rat - 3100 mg/kg LD50 Dermal - rabbit - 4640 mg/kg
5. DIETHYLENE GLYCOL ETHER	LD50 Oral - rat - 470 mg/kg      LC50 Inhalation - rat - 4 h - 450 ppm LD50 Dermal - rabbit - 220 mg/kg Eyes - rabbit - Moderate eye irritation - 24 h

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

COMPONENT #	TOXICITY
1. SODIUM CARBOANTE	Not Established
2. LINEAR ALKYL BENZENE SULFONATE	Not Established
3. SODIUM SULFATE	Not Established
4. Sodium Tripolyphosphate	Toxicity to fish LC50-freshwater fish-1650 mg/l-48 h Toxicity to fish LC50-other fish-220 mg/l-96 h Toxicity to daphnia and other aquatic invertebrates EC50-Daphnia magna (Water flea)-1,815 mg/l-24 h
5. DIETHYLENE GLYCOL ETHER	

## Safety Data Sheet

Product Name: Tidal Wave

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Sodium Tripolyphosphate
2. SODIUM CARBOANTE
3. LINEAR ALKYL BENZENE SULFONATE
4. DIETHYLENE GLYCOL ETHER

#### REGULATION

Not Established

Not Established

Not Established

**OSHA Hazards :** Combustible Liquid, Target Organ Effect, Harmful by ingestion., Harmful by skin absorption., Irritant, Carcinogen

**SARA 313 Components:** 2-Butoxyethanol CAS-No.111-76-2

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**MA, PA, and NJ Right to Know:** 2-Butoxyethanol CAS-No.111-76-2  
Not Established

5. SODIUM SULFATE

## Safety Data Sheet

**Product Name:** Tidal Wave

**Revision Date:** June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: Tile Pro

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Tile Pro

**Product Use:** Tile Cleaner

**COMPANY:**

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 4)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



**Signal word:**

**Hazard statement(s):**

#### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H318 Causes serious eye damage.**

Health hazard	3
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

Product Name: Tile Pro

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Potassium Hydroxide	1310-58-3	10-45%
2. Surfactant Blend	not established	5-20%
3. DIETHYLENE GLYCOL ETHER	34590-94-8	5-15%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: Tile Pro

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: Tile Pro

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Potassium Hydroxide	2 mg/3	2mg/3	Not Established
2. Glycol Ether EB	25ppm	25ppm	50 ppm levels
3. Surfactant Blend	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Lemon

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Yellow/Clear

*pH:* 12.7

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: Tile Pro

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

1. Potassium Hydroxide

LD<sub>50</sub> Oral - rat – 365 mg/kg

LD<sub>50</sub> Dermal - rabbit - 365 mg/kg

2. Glycol Ether EB

LD<sub>50</sub> Oral - rat - 470 mg/kg

LC<sub>50</sub> Inhalation - rat - 4 h - 450 ppm

LD<sub>50</sub> Dermal - rabbit - 220 mg/kg

Eyes - rabbit - Moderate eye irritation - 24 h

3. Surfactant Blend

Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

1. Potassium Hydroxide

Toxicity to fish LC<sub>50</sub> – freshwater fish - 179 mg/l - 24 h

2. Surfactant Blend

Not Established

3. Glycol Ether EB

Toxicity to fish LC<sub>50</sub> - other fish - 220 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC<sub>50</sub> - Daphnia magna (Water flea) - 1,815 mg/l - 24 h

## Safety Data Sheet

Product Name: Tile Pro

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Potassium Hydroxide

2. Glycol Ether EB

3. Surfactant Blend

#### REGULATION

**OSHA Hazards:** Harmful by Ingestion; Corrosive

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard

**OSHA Hazards:** Combustible Liquid, Target Organ Effect, Harmful by ingestion. Harmful by skin absorption. Irritant, Carcinogen

Not Established

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard Chronic Health Hazard

**MA, PA, and NJ Right to Know:** 2-Butoxyethanol CAS-No.111-76-2

## Safety Data Sheet

Product Name: Tile Pro

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

# Safety Data Sheet

Product Name: TM DESCALER

Revision Date: June 28<sup>th</sup> 2015



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** TM Descaler

**Product Use:** Descaler

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

### SECTION 2 HAZARD(S) IDENTIFICATION

#### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

#### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H318 Causes serious eye damage.**

Health hazard	3
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

Product Name: TM DESCALER

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Surfactant	9002-93-2	7-35%
2. PHOSPHORIC ACID	7664-38-2	10-40%
3. HYDROCHLORIC ACID	7647-01-0	10-50%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: TM DESCALER

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## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: TM DESCALER

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Surfactant	not established	not established	not established
2. Phosphoric Acid	1mg/m <sup>3</sup>	1mg/m <sup>3</sup>	not established
3. HYDROCHLORIC ACID	5mg/m <sup>3</sup>	5mg/m <sup>3</sup>	not established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Acidic

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Amber/Clear

*pH:* 1.00

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: TM DESCALER

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

*Chemical Stability:* Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

*Conditions to avoid:* Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

*Incompatibility with other materials:* Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

*Hazardous decomposition products:* Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

*Hazardous polymerization:* Major components of this mixture show no hazardous polymerization.

*Conditions to Avoid:* Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

1. Surfactant

2. Phosphoric Acid

3. HYDROCHLORIC ACID

#### TOXICITY

LD50 Oral – rat – 1,800 mg/kg

LD50 Dermal – rabbit – 8,000 mg/kg

Not Established

Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

1. Surfactant

2. Phosphoric Acid

3. HYDROCHLORIC ACID

#### TOXICITY

LC50 – Pimephales promelas(fat head minnow) – 8.9 mg/l-96.0h ED50 –  
Daphnia (other aquatic invertebrates) – 26 mg/l – 48 h

Not Established

Not Established

## Safety Data Sheet

Product Name: TM DESCALER

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

COMPONENT	REGULATION
1. Surfactant	Not Established
2. Phosphoric Acid	Not Established
3. HYDROCHLORIC ACID	Not Established

## Safety Data Sheet

Product Name: TM DESCALER

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.

## Safety Data Sheet

Product Name: Typhoon

Revision Date: June 28<sup>th</sup> 2015



# SAFETY DATA SHEET

## SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** Typhoon

**Product Use:** High pH Cleaning

COMPANY:

TSI

821 West Broadway Road

Tempe, Arizona 85282

Phone: (480) 784-0400

**Emergency Assistance Calls: Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.**

## SECTION 2 HAZARD(S) IDENTIFICATION

### GHS CLASSIFICATION

**Flammable Liquid (Category 3)**

**Acute Toxicity, Oral (Category 4)**

**Acute Toxicity, Dermal (Category 4)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Signal word:

Hazard statement(s):

### WARNING

**H226: Flammable liquid;;**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H318 Causes serious eye damage.**

Health hazard	3
Flammability hazard	1
Reactivity hazard	2
Other hazard	



## Safety Data Sheet

Product Name: Typhoon

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Potassium Hydroxide	1310-58-3	10-30%
2. Surfactant Blend	not established	5-20%
3. DIETHYLENE GLYCOL ETHER	34590-94-8	3-15%
4. xylenesulfonic acid sodium salt	1300-72-7	1-10%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

## Safety Data Sheet

Product Name: Typhoon

Revision Date: June 28<sup>th</sup> 2015



## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

## Safety Data Sheet

Product Name: Typhoon

Revision Date: June 28<sup>th</sup> 2015



### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Potassium Hydroxide	2 mg/3	2mg/3	Not Established
2. Glycol Ether EB	25ppm	25ppm	50 ppm levels
3. Surfactant Blend	Not Established	Not Established	Not Established
4. xylenesulfonic acid sodium salt	Not Established	Not Established	Not Established

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Lemon

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Light Yellow/Clear

*pH:* 13

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

## Safety Data Sheet

Product Name: Typhoon

Revision Date: June 28<sup>th</sup> 2015



### SECTION 10 STABILITY AND REACTIVITY

**Chemical Stability:** Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

**Conditions to avoid:** Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

**Incompatibility with other materials:** Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

**Hazardous polymerization:** Major components of this mixture show no hazardous polymerization.

**Conditions to Avoid:** Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

1. Potassium Hydroxide	LD <sub>50</sub> Oral - rat – 365 mg/kg LD <sub>50</sub> Dermal - rabbit - 365 mg/kg
2. Glycol Ether EB	LD <sub>50</sub> Oral - rat - 470 mg/kg LC <sub>50</sub> Inhalation - rat - 4 h - 450 ppm LD <sub>50</sub> Dermal - rabbit - 220 mg/kg Eyes - rabbit - Moderate eye irritation - 24 h
3. Surfactant Blend	Not Established
4. xylenesulfonic acid sodium salt	Not Established

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

#### TOXICITY

1. Potassium Hydroxide	Toxicity to fish LC <sub>50</sub> – freshwater fish - 179 mg/l - 24 h
2. Surfactant Blend	Not Established
3. Glycol Ether EB	Toxicity to fish LC <sub>50</sub> - other fish - 220 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates EC <sub>50</sub> - Daphnia magna (Water flea) - 1,815 mg/l - 24 h
4. xylenesulfonic acid sodium salt	Not Established

## Safety Data Sheet

Product Name: Typhoon

Revision Date: June 28<sup>th</sup> 2015



### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

Not a hazardous material as shipped per 49 CFR table 172.101

Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you.

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product. To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

This *mixture* has *no established regulatory information* all regulatory information given is based on individual components of the mixture by component number

#### COMPONENT

1. Potassium Hydroxide

2. Glycol Ether EB

3. Surfactant Blend

4. xylenesulfonic acid sodium salt

#### REGULATION

**OSHA Hazards:** Harmful by Ingestion; Corrosive

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard

**OSHA Hazards:** Combustible Liquid, Target Organ Effect, Harmful by ingestion. Harmful by skin absorption. Irritant, Carcinogen

Not Established

**SARA 311/312 Hazards:** Fire Hazard, Acute Health Hazard Chronic Health Hazard

**MA, PA, and NJ Right to Know:** 2-Butoxyethanol CAS-No.111-76-2  
Not Established

## Safety Data Sheet

Product Name: Typhoon

Revision Date: June 28<sup>th</sup> 2015



### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.



## SAFETY DATA SHEET

### SECTION 1 MATERIAL AND MANUFACTURER IDENTIFICATION

**Product Identifier:** USR  
**Product Use:** Urine Stain Remover

**COMPANY:**

TSI  
821 West Broadway Road  
Tempe, Arizona 85282  
Phone: (480) 784-0400

**Emergency Assistance Calls:** Poison Control Center (800) 222-1222 (U.S.A.) 24hrs.

### SECTION 2 HAZARD(S) IDENTIFICATION

**GHS CLASSIFICATION**

**Oxidizing Liquids/Solids (Category 2)**

**Acute Toxicity, Oral (Category 5)**

**Acute Toxicity, Dermal (Category 5)**

**Acute Toxicity, Inhalation (Category 5)**

**Serious Eye Damage and Irritation (Category 2B)**

**Routes of Exposure:** Eye contact, skin contact, inhalation, and ingestion.

**Inhalation:** Unlikely to occur when used as directed. Excessive exposure may cause irritation of the respiratory tract

**Eye Contact:** May cause severe irritation with possible permanent eye damage.

**Skin Contact:** Repeated, prolonged exposure may cause skin irritation, drying, chapping.

**Ingestion:** Very small quantity is unlikely to cause injury. Larger quantity may cause injury; if swallowed can cause gastrointestinal irritation; including but limited to nausea, vomiting and diarrhea.

**Carcinogenic Potential:** Not established

**Acute Effects:** This product is considered to be a potential irritant. This product should not be used for any other purpose than the intended use in section 1.

**Chronic Effects:** Not established



Health hazard	3
Flammability hazard	0
Reactivity hazard	2
Other hazard	OX

**Signal word:**

**DANGER**

**Hazard statement(s):**

**H272 May cause fire or explosion; strong oxidizer**

**H303: May be harmful if swallowed;**

**H313: May be harmful in contact with skin;**

**H335: Maybe harmful if inhaled;**

**H318 Causes serious eye damage;**



## Safety Data Sheet

Product Name: USR

Revision Date: June 28<sup>th</sup> 2015



### SECTION 3 COMPOSITON/INFORMATION ON INGREDIENTS

COMPONENT	CAS #	CONCENTRATIONS
1. Hydrogen Peroxide	7722-84-1	60-95%

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### SECTION 4 FIRST-AID MEASURES

**Inhalation:** Remove from further exposure to fresh air. If respiratory irritation, dizziness, or nausea occurs seek immediate medical attention.

**Eye Contact:** Flush eyes with a directed stream of water for 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. Washing eyes immediately after exposure is essential to achieve maximum effectiveness and minimize potential irritation. If irritation persists, seek immediate medical attention.

**Skin Contact:** Wash contact areas with soap and water. Launder exposed clothing before reuse.

**Ingestion:** If swallowed, do not induce vomiting. Seek immediate medical attention.

### SECTION 5 FIRE-FIGHTING MEASURES

#### FLAMMABILITY PROPERTIES

*Flashpoint:* N/A

*Flammable Limits:* N/A

*Auto ignition Temperature:* N/A

#### FIREFIGHTING PROCEDURES

**General Hazard:** Smoke may contain original material, in addition to toxic and/or irritating compounds. Avoid heat or open flames

**Firefighting Instructions:** Evacuate all unnecessary personnel. Use dry chemical, CO<sub>2</sub>, water, foam or appropriate extinguishing media for fires where water is not appropriate. No special firefighting instructions.

**Firefighting Equipment:** Firefighters should wear NIOSH/MSHA approved self-contained, positive pressure breathing apparatus and full protective clothing.

**Hazardous Combustion Products:** Combustion may release oxides of carbon and sulfur.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated.

Residue can burn. Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds.

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## SECTION 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Persons performing the cleanup should wear personal protective equipment sufficient to keep material away from skin. Avoid direct contact with material. See section 4 for First-Aid Advice. See section 5 for Firefighting Advice.

### PROTECTIVE MEASURES

To minimize exposure to all chemicals, including this product, use good industrial hygiene and common sense. Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (See section 4 for more advice). Wear NIOSH/MSHA approved organic respirator when ventilation is not adequate or when the sufficiency of ventilation to maintain concentrations below exposure limits is in question. Wear chemical safety goggles to protect against splashes or contact with eyes. See OSHA 29 CFR 1910.33

### CLEAN-UP PROCEDURES

*Small Spills:* Sweep up to dispose of spill in DOT approved waste container.

*Large Spills:* Sweep up or Scoop up and dispose into DOT approved waste container. If possible complete clean up on a dry basis. Comply with all applicable governmental regulations on spill reporting, handling and disposal of waste. Contain all spills or leaks to prevent discharge into the environment. Responsibility of all spills or releases reported to the appropriate local, state and federal agencies falls upon the user.

## SECTION 7 HANDLING AND STORAGE

### HANDLING

This product is professional strength product to be used by professionals only. Avoid breathing vapors/mist of this product. Always keep container tightly closed and properly labels. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Impervious boots/shoes covering should be used if material is anticipated to contact feet. As with all chemicals, practice good industrial hygiene when handling this product. In other words, always work in a well-ventilated area and avoid inhalation of product dust do not ingest or have contact with your eyes or skin.

The manufacturer and seller warrant that this product conforms to its standard specifications when used according to directions. As the conditions of method of its use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for use of this product. Information contained herein is believed to be true but all statements and suggestions are made without any warranty, expressed or implied, regarding accuracy of the information. The hazards connected with the use of this material and the results to be obtained from the use thereof.

### STORAGE

Avoid excessive heat. Avoid storage with oxidizing or reducing agents and acids. Employees should be trained to handle this product safely. Store the product in a cool dry area away from ignition sources. Loosen closures cautiously. Product may become a solid at temperatures below 0°C (32°F).

*Storage temperature:* Store in cool dry place

*Storage pressure:* Atmospheric

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### SECTION 8 EXPOSURE / PERSONAL PROTECTION

#### EXPOSURE LIMITS

Exposure limits have not been established for this mixture. Avoid, as far as reasonably practicable, inhalation of vapor, mists or fumes generated. However, limits for components listed below:

COMPONENT #	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH TWA STEL
1. Hydrogen Peroxide	1 ppm(1.4 mb/m <sup>3</sup> )	1 ppm(1.4 mb/m <sup>3</sup> )	1 ppm(1.4 mb/m <sup>3</sup> )

#### ENGINEERING CONTROLS

The level of protection and types of control will vary depending upon potential exposure conditions. If user operations generate dust, fume or mist, use adequate ventilation to keep exposure below exposure limit.

#### PERSONAL PROTECTION

*Ventilation and engineering controls:* Use only in well ventilated area. If necessary, use exhaust ventilation to insure adequate ventilation. Insure that water is readily available and that you are prepared to properly wash out your eyes should the need arise. (Refer to section 4).

*Respiratory:* Wear NIOSH/MSHA approved respirator when ventilation is not adequate. A NIOSH /MSHA –approved air purifying respirator with an organic vapor cartridge or canister may be advisable under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure, air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

*Eye Protection:* Wear safety goggles to protect against eye contact. See OSHA 29 CFR 1910.33

*Skin:* Wear chemical impervious gloves. Wear protective clothing to minimize skin contact. Wash skin after use. Wash contaminated clothing and dry before reuse.

*Other:* One should always use chemicals with an awareness of the potential hazard of the effect on the human system. To minimize employee exposure to all chemicals, including this product, use good industrial hygiene practices.

### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

*Physical State and Appearance:* Liquid

*Odor:* Distinct

*Vapor density:* N/A

*Freezing point:* N/A

*Solubility in water:* soluble

*Flammability:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Odor threshold:* N/A

*Flash point:* N/A

*Evaporation rate:* N/A

*Upper/lower flammability or explosive limits:* N/A

*Vapor pressure:* N/A

*Auto-ignition temperature:* N/A

*Color:* Clear

*pH:* 3.5

*Boiling point:* >212 F

*Melting point:* N/A

*Density:* N/A

*Particle size:* N/A

*Viscosity:* N/A

*Vapor pressure:* N/A

*Vapor density:* N/A

*Relative density:* N/A

*Flammability (solid, gas):* N/A

*Decomposition temperature:* N/A

*Vapor density:* N/A

*Partition coefficient:* n-octanol/water: N/A

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### SECTION 10 STABILITY AND REACTIVITY

*Chemical Stability:* Stable under ambient temperature and atmospheric pressure. Stable under recommended storage and handling conditions.

*Conditions to avoid:* Keep away from heat or excessive pressure. Active ingredient decomposes at elevated temperatures.

*Incompatibility with other materials:* Although the mixture has no known incompatibilities, some **components** of this mixture are not compatible with acids, metals, oxidizing or reducing materials.

*Hazardous decomposition products:* Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Sulfur oxides and Carbon oxides.

*Hazardous polymerization:* Major components of this mixture show no hazardous polymerization.

*Conditions to Avoid:* Strong Acids, Lead, Tin/Tin Oxides, Zinc and Aluminum.

### SECTION 11 TOXICOLOGICAL INFORMATION

Toxicological information has not been established on this mixture. Toxicological information on components within this mixture is given by:

#### COMPONENT #

1. Hydrogen Peroxide

#### TOXICITY

LD50 Rat: 1518 mg/kg LD50 Rabbit: 820 mg/kg

LD50 Mouse: 200 mg/kg

### SECTION 12 ECOLOGICAL INFORMATION

Ecological information has not been established for this product. Ecological information on components within this mixture is given by:

#### COMPONENT #

1. Hydrogen Peroxide

#### TOXICITY

Not Established

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### SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of all waste, empty bottles and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

Do not dump into storm drains, sanitary sewers or any body of water. All disposal methods must be in compliance with all federal, State/ Provincial and local laws and regulations. Regulations may vary in different locations.

Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. The vendor has no control over the management practices or the processes by which the party who handles or uses this material. The information presented here pertains only to the product as shipped in its intended condition and recommended usage.

### SECTION 14 TRANSPORT INFORMATION

These shipments are ORM-D and exempt from Bill of Lading requirements when sent via ground under 1 Liter when packaged for retail sale per 49 CFR 173.152. If product exceeds 1 Liter then will comply with the following: UN Number: 2984 Proper Shipping Name: Hydrogen Peroxide Aqueous Solution Hazard Class: 5.1 Packaging Group: III Label: Hydrogen Peroxide Aq. Description Consumer commodity, ORM-D

IMDG: Basic Description: UN2984, Hydrogen Peroxide Aqueous Solution, 5.1, III, LTD QTY Marine Pollutant: No \*Shipping Instructions as shipped are: ORMD/LTD QTY Exemptions Used 173.152 LTD QTY & ORM-D Consult 49 CFR to assure compliance with all applicable federal, state/provincial and local laws and regulations that may apply to you

### SECTION 15 REGULATORY INFORMATION

US Federal Regulations:

OSHA standards require that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, safety data sheet (SDS) sheets, training and access to written records. We request that you, as per your legal duty to, make all information in this SDS available to your employees and those who handle or consume the product To aid our customers in complying with regulatory requirements regulatory information for components of this product are indicated below

#### COMPONENT

1. Hydrogen Peroxide

#### REGULATION

OSHA Hazards: Oxidizer, Target Organ Effect, Toxic by ingestion, Corrosive, Carcinogen SARA 311/312 Hazards: Reactivity Hazard, Acute Health Hazard, and Chronic Health Hazard

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### SECTION 16 OTHER INFORMATION

While the information is believed to be accurate, **TSI** makes no representations as to its accuracy or sufficiency. This SDS summarizes to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources of each individual component. Since **TSI** cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. User assumes all risks incident to the use of this (these) product(s). Users are responsible to verify this data under their own operating conditions to determine whether this product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance on information contained herein. This information relates only to the product-designated herein, and does not relate to its use in combination with any other material or in any other process.