

SAFETY DATA SHEET

125-280 Solution™

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: 125-280 Solution™
Product Use: STERIZONE® 125L+ and STERIZONE® VP4 Sterilizers
Manufacturer/Supplier: TSO₃ Inc.
2505, avenue Dalton
Québec (Québec) G1P 3S5
Phone Number: 418 651-0003
Emergency Phone: Customer Service: 866 715-0003
CANUTEC (Canada): 613 996-6666 (cellular: *666)
Date of Preparation: August 20, 2015

Section 2: IDENTIFICATION OF HAZARDS

EMERGENCY OVERVIEW

DANGER

CORROSIVE MATERIAL CAUSES BURNS, IS IRRITATING TO EYES AND SKIN.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, inhalation, and ingestion.

Eye: Causes severe burns. Risk of serious damage to eyes.

Skin: Severe irritant to skin. May cause burns.

Ingestion: May cause burns. Harmful if swallowed. Causes gastrointestinal irritation if ingested. May cause gastrointestinal distress, nausea or vomiting.

Inhalation: Harmful by inhalation. Causes burns to the respiratory tract.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: May cause serious chemical burns. Severe irritation. Redness. Pain. Blisters. Serious skin and eye burns. May cause burning of mouth, throat, and esophagus. Irritating to respiratory tract.

Medical Conditions Aggravated by Exposure: Asthma. Allergies.

Target Organs: Skin, eyes, gastrointestinal tract, and respiratory tract.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient | CAS # | Wt. % |
|-------------------|-----------|---------|
| Hydrogen peroxide | 7722-84-1 | 40 – 60 |

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Section 4: FIRST AID MEASURES

Eye Contact: In case of contact with the eyes, rinse immediately with running water for at least 15 minutes. If wearing contact lenses, remove them if possible and continue to rinse with running water. Victims should not rub eyes or keep them close. Seek medical attention immediately.

Skin Contact: In case of contact with skin, rinse immediately with running water. Remove contaminated clothing/shoes. Wash normally with water and soap exposed parts. Wash clothing before wearing again. If skin irritation develops and persists, seek medical attention.

Inhalation: In case of inhalation, remove the person to fresh air. If breathing is difficult, apply an oxygen mask. If not breathing, give artificial respiration. DO NOT use mouth-to-mouth resuscitation. Call a poison control center and/or physician immediately.

Ingestion: Rinse mouth with tap water immediately. Do not induce vomiting. If victim is conscious and alert, give 2 glasses of water. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

Note to Physicians: Evacuating the stomach via emesis induction or gastric lavage should be avoided. If severe distension of the stomach or esophagus occurs insert gastric tube to eliminate gas.

Section 5: FIRE FIGHTING MEASURES

Flammability: Not flammable by WHMIS/OSHA criteria.

Extinguishing products:

Suitable Extinguishing Means: Use water only. Contact professional fire-fighters immediately.

Unsuitable Extinguishing Method: DO NOT use carbon dioxide or dry chemical.

Products of Combustion: Oxygen, hydrogen gas, water, heat, steam.

Explosion Data:

Sensitivity to Mechanical Impact: Not available.

Sensitivity to Static Discharge: Not available.

Protection of Firefighters: Highly toxic gases may be generated. May decompose explosively. Use a water spray to keep fire-exposed containers cool. For large fires, flood fire area with large amount of water, while retaining vapors to the ground by spraying water. Keep the material upstream of the flames. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

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Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unauthorized and unprotected personnel. Eliminate sources of ignition. Use water spray to disperse the gas/vapor.

Environmental Precautions: Many gases are heavier than air and therefore spread along ground and collect in low or confined areas (sewers, basements, tanks). Keep out of drainage pipes, sewers, ditches, and waterways.

Methods for Containment: Contain and/or absorb spill with inert material (e.g. inert absorbent pad, sand, vermiculite). DO NOT use combustible materials such as sawdust.

Cleaning Methods: Shovel material and place in a disposal container. Use only glass utensils, stainless steel, aluminum or plastic for handling the product. Ventilate the area. Keep combustibles away from spilled material.

Other Information: Not available.

Section 7: HANDLING AND STORAGE

Handling:

Avoid contact with skin and eyes. Do not swallow. Do not breathe gas/fumes/vapor/spray. Avoid contact with clothing and combustibles. Launder contaminated clothing before reuse. Do not open the container. Do not remove the seal on the cap. Do not reuse the container. Do not recycle the container. When using, do not eat or drink. Wash hands before eating, drinking, or smoking. Use only in a well ventilated area.

Storage:

Keep away from heat, sparks, and flames. Store in a cool, dry, well-ventilated area away from incompatible chemical substances. Keep container tightly closed. Store away from light. Contents may develop pressure upon prolonged storage. Unused chemicals should not be returned to the original container.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

| Ingredient | Exposure Limits | | |
|-------------------|-----------------------------|-----------------------|--------------------|
| | OSHA-PEL | ACGIH | NIOSH |
| Hydrogen peroxide | 1.0 ppm (PEL) | 1.0 ppm (TWA) | 75 ppm (DIVS/IDLH) |
| | 1.4 mg/m ³ (PEL) | 1.4 mg/m ³ | |

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use ventilation to keep exposures below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves (nitrile, PVC or neoprene).

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: In case of insufficient ventilation, wear suitable respiratory equipment. Respirators must follow requirements under OSHA (29 CFR 1910.134) and ANSI (Z88.2) respiratory protection standards.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

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Section 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|----------------------------|
| Appearance: | Clear |
| Color: | Colorless |
| Odor: | Odorless |
| Odor Threshold: | Not available |
| Physical State: | Liquid |
| pH: | ≤ 3.0 |
| Viscosity: | Not available |
| Freezing Point: | ~ -52°C (~ -62°F) |
| Boiling Point: | ~ 114°C (~ 237°F) |
| Flash Point: | Not available |
| Evaporation Rate: | > 1.0 |
| Minimal Threshold Flammability: | Not available |
| Maximum Threshold Flammability: | Not available |
| Vapor Pressure: | 18.3 mm Hg @ 30°C (~ 86°F) |
| Vapor Density: | Not available |
| Specific Gravity: | 1.19 @ 20°C (~ 68°F) |
| Solubility in Water: 100%. | Miscible |
| Coefficient of Water/Oil Distribution: | Not available |
| Auto-ignition Temperature: | Not available |
| Percent Volatile, wt. %: | Not available |
| VOC, wt. %: | Not available |

Section 10: STABILITY AND REACTIVITY

Stability: Decomposes slowly to release oxygen. Unstable when heated or contaminated with heavy metals, reducing agents, rust, dirt or organic materials. Stability is reduced when pH is above 4.0.

Conditions of Reactivity: Mechanical shock, heat, incompatible materials, light, ignition sources, dust generation, combustible materials, rust, dust.

Incompatible Materials: Strong oxidizing agents, strong reducing agents, alcohols, finely powdered metals, permanganates, ethers, alkaline materials, nitrogen compounds, organic matter, activated carbon, ketones, soluble fuels (acetone, ethanol, glycerol), wood, and asbestos.

Hazardous Decomposition Products: Oxygen, hydrogen gas, water, heat, vapor. Thermal decomposition generates: corrosive vapors.

Possibility of Hazardous Reactions: Yes

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

| Ingredients | Hydrogen Peroxide |
|-----------------------|------------------------------------|
| LD50 oral (rat) | > 225 mg/kg FMC Study #I86-914 |
| LC50 inhalation (rat) | > 0.17 mg/L FMC Study #I89-1080 |

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- Eye:** Causes severe burns. Risk of serious damage to eyes. Severe irritation.
- Skin:** Severe irritant to skin. May cause burns. Redness. Pain. Blisters.
- Ingestion:** May cause burns. Harmful if swallowed. Causes gastrointestinal irritation if ingested. May cause gastrointestinal distress, nausea or vomiting. May cause burning of mouth, throat, and esophagus.
- Inhalation:** Harmful by inhalation. Causes burns to the respiratory airways. Irritating to the respiratory airways.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available

Chronic Effects: Not hazardous by WHMIS/OSHA criteria.

Carcinogenicity: Not hazardous by WHMIS/OSHA criteria.

Ingredient

Chemical Listed as Carcinogen or Potential Carcinogen *

Hydrogen peroxide

A-3

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS/OSHA criteria.

Reproductive Effects: Not hazardous by WHMIS/OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Respiratory Tract Sensitization: Not hazardous by WHMIS/OSHA criteria.

Skin Sensitization: Not hazardous by WHMIS/OSHA criteria.

Synergistic Toxicity Materials: Not available

Section 12: ECOLOGICAL INFORMATION

Ecotoxicological effects: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available

Bioaccumulation / Accumulation: Not available

Mobility in Environment: Not available

Section 13: DISPOSAL CONSIDERATIONS

Instructions for waste disposal:

Dilute with plenty of water and allow the hydrogen peroxide to decompose. This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

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Section 14: TRANSPORTATION INFORMATION

DOT Classification

HYDROGEN PEROXIDE, AQUEOUS SOLUTION, Class 5.1 (8), UN2014, PG II

TDG Classification

HYDROGEN PEROXIDE, AQUEOUS SOLUTION, Class 5.1 (8), UN2014, PG II

Section 15: REGULATORY INFORMATION

Federal Regulations

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

US: SDS prepared pursuant to the standards on the disclosure of information with respect to hazardous materials (CFR29 1910.1200).

SARA Title III

| Ingredient | Section 302 (EHS) TPQ (lb) | Section 304 EHS RQ (lb) | CERCLA RQ (lb) | Section 313 |
|-------------------|-----------------------------------|-----------------------------------|-------------------|----------------|
| Hydrogen peroxide | Hydrogen Peroxide (Conc.> 52%) | Hydrogen peroxide (Conc.> 52%) | 1,000 | 1,000 |

State Regulations

California Proposition 65:

This product contains no chemical known to the State of California to cause cancer, birth defects or other damage at the level of the reproductive device.

Global Inventories

| Ingredient | Canada DSL/NDSL | USA TSCA |
|-------------------|--------------------|-------------|
| Hydrogen peroxide | DSL | Yes |

HMIS - Hazardous Materials Identification System

Health - 3 Flammability - 0 Physical Hazard - 1 PPE - H

NFPA - National Fire Protection Association:

Health - 3 Fire - 0 Reactivity - 1

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Class C - Oxidizing Material
Class E - Corrosive Material
Class F - Dangerously Reactive Material

WHMIS Hazard Symbols:



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SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

- A1 - Confirmed as carcinogenic in humans.
- A2 - Suspected carcinogenic in humans.
- A3 - Carcinogenic in animals.
- A4 - Not classifiable as carcinogenic in humans.
- A5 - Not suspected as carcinogenic in humans.

IARC (I) International Agency for Research on Cancer.

- 1 - The agent (mixture) is carcinogenic in humans.
- 2A - The agent (mixture) is probably carcinogenic in humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
- 2B - The agent (mixture) is possibly carcinogenic in humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
- 3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity in humans.
- 4 - The agent (mixture, exposure circumstance) is probably not carcinogenic in humans.

NTP (N) National Toxicology Program.

- 1 - Known to be carcinogenic.
- 2 - Reasonable expectation of being carcinogenic.

Section 16: OTHER INFORMATION

Disclaimer of liability:

The above information has been prepared on the basis of the most reliable information available. They do not claim to be exhaustive and shall be considered as a guide. The information contained in this document applies to this specific product as supplied. It may not be valid for this product when used in combination with any other materials. It is the user's responsibility to inquire as to the suitability and completeness of this information for the user's own particular use. TSO₃ cannot be held liable for any damage resulting from the use or from contact with the above product.

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