125-280 Solution™

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : 125-280 Solution™

Product code : 44010

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : To be used exclusively with a STERIZONE® VP4 Sterilizer (in healthcare facility or private clinic)

1.3. Details of the supplier of the safety data sheet

TSO_3 Inc.
2505, avenue Dalton
Québec, QC - Canada
G1P 3S5
T (418) 651-0003
Customer service : 866-715-0003
www.tso3.com

1.4. Emergency telephone number

Spill, Leak, Fire, Exposure, or Accident : CHEMTREC: 1-800-424-9300

(For Hazardous Materials Incident)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Oxidizing liquid 2
Acute toxicity 4 (Oral)
Acute toxicity 3 (Inhalation)
Skin corrosion 1B
Serious eye damage 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : May intensify fire; oxidizer. Harmful if swallowed. Toxic if inhaled. Causes severe skin burns and eye damage.

Precautionary statements (GHS-US) : Keep away from heat. Keep/Store away from clothing/combustible materials. Take any precaution to avoid mixing with combustibles. Do not breathe dust/fume/gas/mist/ vapors/spray. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. If swallowed: Immediately call a poison center/doctor. Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a poison center/doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. In case of fire: Use only water to extinguish. Do NOT use carbon dioxide or dry chemical. Store locked up. Store in a well-ventilated place. Keep container tightly closed. Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

Other hazards not contributing to the classification : Corrosive to the respiratory tract

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Hydrogen peroxide	(CAS No) 7722-84-1	40 - 60	Ox. Liq. 1 Acute Tox. 4 (Oral) Acute Tox. 4 (Inhalation) Skin Corr. 1A
The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.			

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. Immediately call a POISON CENTER or doctor/physician. Do NOT allow victim to rub eyes or to keep eyes closed.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER or doctor/physician.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation : Toxic if inhaled. Corrosive to the respiratory tract. Causes burns to the respiratory system.

Symptoms/injuries after skin contact : Causes severe skin burns. Symptoms may include redness, pain, blisters.

Symptoms/injuries after eye contact : Causes serious eye damage. Symptoms may include redness, pain, blisters. Cause serious chemical burns.

Symptoms/injuries after ingestion : Harmful if swallowed. May cause stomach distress, nausea or vomiting. May cause burns to the linings of the mouth, throat, and gastrointestinal tract.

4.3. Indication of any immediate medical attention and special treatment needed

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible). Evacuating the stomach via emesis induction or gastric lavage should be avoided. If severe distension of the stomach or esophagus occurs, insert gastric tube.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use water only.

Unsuitable extinguishing media : DO NOT use carbon dioxide. DO NOT use dry chemical powder.

5.2. Special hazards arising from the substance or mixture

Fire hazard : May intensify fire; oxidiser. Highly toxic gases may be generated. Products of combustion may include, and are not limited to: oxygen, hydrogen gas, water, heat, steam.

5.3. Advice for firefighters

Firefighting instructions : Use water spray to keep fire-exposed containers cool. For large fires, flood fire area with large quantities of water, while knocking down vapours with water fog. Do not get water inside containers.

Protection during firefighting : May decompose explosively. Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Eliminate sources of ignition. Use water spray to disperse the gas/vapors.

6.1.2. For emergency responders

No additional information available

6.2. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not absorb in sawdust, paper, cloth or other combustible absorbents. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Provide ventilation. Keep combustibles (wood, paper, oil, etc.) away from spilled material.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Take any precaution to avoid mixing with combustibles. Keep away from heat, flames and sparks. Do not get in eyes, on skin, or on clothing. Do not swallow. Do not breathe dust/fume/gas/mist/vapors/spray. Handle and open container with care. Do not remove the seal on the cap. Do not reuse container. When using do not eat, drink or smoke. Never add water to this product. Use only outdoors or in a well-ventilated area.

Hygiene measures : Wash hands before eating, drinking, or smoking. Launder contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep locked up and out of reach of children. Store in a cool, dry, place away from incompatible materials. Keep container tightly closed. Store away from light. Contents may develop pressure upon prolonged storage. Unused chemicals should not be returned to the container. Keep away from heat, sparks, and flame. Store in a well-ventilated place

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/ personal protection

8.1. Control parameters

Hydrogen peroxide (7722-84-1)		
USA ACGIH	ACGIH TWA (ppm)	1 ppm
USA OSHA	OSHA PEL (TWA) (mg/m³)	1.4 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	1 ppm

8.2. Exposure controls

Appropriate engineering controls : Use explosion-proof ventilation equipment. Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

Hand protection : Wear chemically resistant protective gloves.

Eye protection : Wear approved eye (properly fitted dust- or splash-proof chemical safety goggles) / face (face shield) protection.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : A NIOSH approved respirator is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls	:	Maintain levels below Community environmental protection thresholds.
Other information	:	Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid.
Appearance	:	Clear.
Colour	:	Colorless.
Odour	:	Odorless.
Odour threshold	:	No data available.
pH	:	<= 3
Relative evaporation rate (butylacetate=1)	:	No data available.
Melting point	:	No data available.
Freezing point	:	~ -52 °C (~ -62 °F)
(50%) Boiling point	:	~ 114 °C (~ 237 °F)
(50%) Flash point	:	Non-combustible.
Self ignition temperature	:	No data available
Decomposition temperature	:	No data available.
Flammability (solid, gas)	:	No data available.
Vapour pressure	:	18.3 mm Hg at 30 °C (86 °F) (50%)
Relative vapour density at 20 °C	:	No data available.
Relative density	:	1.19 at 20 °C (68 °F) (50%)
Solubility	:	Completely soluble.
Log Kow	:	No data available.
Viscosity, kinematic	:	No data available.
Viscosity, dynamic	:	No data available.
Explosive properties	:	No data available.
Oxidising properties	:	May intensify fire;
oxidiser. Explosive limits	:	No data available.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

May cause or contribute to the combustion of other material generally by yielding oxygen.

10.2. Chemical 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.

10.3. Possibility of hazardous reactions

Yes.

10.4. Conditions to avoid

Mechanical shock, heat, incompatible materials, light, ignition sources, dust generation, combustible materials, rust, dust, and pH > 4.0. Never add water to this product.

10.5. 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.

10.6. Hazardous decomposition products

May include, and are not limited to: oxygen, hydrogen gas, water, heat, steam. Thermal decomposition generates: Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed. Toxic if inhaled.

125-280 Solution™	
LD50 oral rat	1588 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	3.9 mg/l/4h

Hydrogen peroxide (7722-84-1)	
LD50 oral rat	801 mg/kg
LD50 dermal rabbit	2000 mg/kg
LC50 inhalation rat (g/m³)	2 g/m³/4h

Skin corrosion/irritation : Causes severe skin burns.

Serious eye damage/irritation : Causes serious eye damage.

Respiratory or skin sensitisation : Based on available data, the classification criteria are not met.

Germ cell mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Hydrogen peroxide (7722-84-1)	
IARC group	3

Reproductive toxicity : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure) : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure) : Based on available data, the classification criteria are not met

Aspiration hazard : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : Toxic if inhaled. Corrosive to the respiratory tract. Causes burns to the respiratory system.

Symptoms/injuries after skin contact : Causes severe skin burns. Symptoms may include redness, pain, blisters.

Symptoms/injuries after eye contact : Causes serious eye damage. Symptoms may include redness, pain, blisters. Cause serious chemical burns.

Symptoms/injuries after ingestion : Harmful if swallowed. May cause stomach distress, nausea or vomiting. May cause burns on the linings of the mouth, throat, and gastrointestinal tract.

SECTION 12: Ecological information

12.1. Toxicity

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

12.2. Persistence and degradability

125-280 Solution™	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

125-280 Solution™	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : 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.

Additional information : Do not reuse container.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

DOT NA no. UN2014

14.2. UN proper shipping name

DOT Proper Shipping Name : Hydrogen peroxide, aqueous solutions

Department of Transportation (DOT) Hazard Classes : 5.1 (8)

Hazard labels (DOT) :

Packing group (DOT) : II

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

Hydrogen peroxide (7722-84-1)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on SARA Section 302 (Specific toxic chemical listings)	
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 (concentration >52%)

15.2. US State regulations

125-280 Solution™	
State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

IARC	**International Agency for Research on Cancer.**
	1 - Carcinogenic to humans; 2A - Probably carcinogenic to humans; 2B - Possibly carcinogenic to humans; 3 - Not classifiable; 4 - Probably not carcinogenic to humans.
NTP	**National Toxicology Program.**
	1 - Evidence of Carcinogenicity; 2 - Known Human Carcinogens; 3 - Reasonably anticipated to be Human Carcinogen; 4 - Substances delisted from report on Carcinogens; 5 - Twelfth Report - Items under consideration.

SECTION 16: Other information

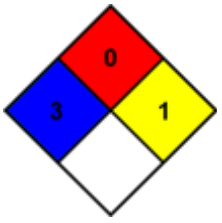
Indication of changes :None.

Other information :None.

NFPA health hazard : 3

NFPA fire hazard : 0

NFPA reactivity : 1



This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product

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