

1 Identification

Other means of identification

None

Recommended use of the chemical and restriction on use

Fogging solution for Whole Room Disinfection

Supplier's details

Halosil International Inc

91 Lukens Drive
New Castle, DE 19720

Phone Number:	302-454-8102
Fax Number:	302-454-8009
E-Mail:	Sales@halsosil.com

Emergency phone number

CHEMTREC: US & CANADA-1-800-424-9300, Outside US-+1-703-527-3887

2 Hazard(s) identification

Classification of the substance or mixture

Eye Irritant

GHS label elements

Warning



Causes eye irritation

Wear protective gloves/protective clothing/eye protection/face protection.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF eye irritation persists: Get medical advice/attention.

Other hazards which do not result in classification

None

3 Composition/information on ingredients

Description	CAS Number	EINECS Number	%	Note
Hydrogen Peroxide	7722-84-1		0 - 5	
Silver	7440-22-4		0 - 0.01	

4 First-aid measures

Description of necessary first-aid measures

General Advice

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show label where possible).

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice in the event of symptoms.

Skin contact

Wash off immediately with plenty of water while removing all contaminated clothes and shoes. Seek medical attention/advice if skin irritation persists.

Inhalation

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

Ingestion

Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms/effects, acute and delayed

Symptoms/injuries after inhalation:	May be irritating to the mucous membranes and to the respiratory system.
Symptoms/injuries after skin contact:	Frequent or prolonged contact with skin may cause dermal irritation
Symptoms/injuries after eye contact:	Causes serious eye irritation.
Symptoms/injuries after ingestion:	May cause burns or irritation of the linings of the mouth, throat and GI tract.

Indication of immediate medical attention and special treatment needed, if necessary

No additional information available

5 Fire-fighting measures

Suitable extinguishing media

Product does not burn.

Flood with plenty of water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of oxygen which may intensify fire. Containers may swell and burst during a fire due to internal pressure caused by heat.

Special protective actions for fire-fighters

Exercise caution when fighting any chemical fire.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

General Measures

Insure adequate ventilation. Do not breath fumes, vapors. Avoid contact with skin, eyes and clothes.

Non-emergency Personnel

Use personal protective equipment as required. Evacuate personnel to safe areas.

Precautions

Keep people away from and upwind of spill/leak.

Other Information

Refer to protective measures listed in Section 7 and 8.

Emergency Responders

Protective Equipment:

Equip clean up crews with proper protection

Emergency Procedures:

Stop leak if safe to do so. Evacuate unnecessary personnel. Ventilate area.

Environmental precautions

Refer to protective measures listed in Section 7 and 8. Prevent further leakage or spillage if safe to do so.

Methods and materials for containment and cleaning up

Methods for Containment

Prevent further leakage or spillage if safe to do so.

Methods for Cleaning Up

Contain any spills with dikes and capture in suitable containers for recovery or disposal. Soak up with inert absorbent material. Do not absorb in sawdust, paper cloth or other combustible absorbents. Comply with applicable local, national and international regulation.

7 Handling and storage

Precautions for safe handling

Read label before use. Provide good ventilation in process area to prevent formation of vapor. Avoid all eye and skin contact and do not breathe vapor and mist. Keep away from incompatible materials. Wash hands and other exposed areas with mild soap before eating, drinking or smoking and when leaving work.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place.

Protect from moisture. Store locked up. Keep out of the reach of children.

Store away from other incompatible materials. Strong alkalis, strong oxidizing agents. Organic materials. Reducing agents. Metal salts. Alkali Metals, wood, paper Copper and it's alloys.
Keep away from heat and direct sunlight.
Do not freeze.

Incompatible Products: Bases. Oxidizing Agents.

8 Exposure controls/personal protection

Control parameters

Ingredients with occupational exposure limits to be monitored

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogen Peroxide CAS# 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m ³ (vacated) TWA: 1 ppm (vacated) TWA: 1.4 mg/m ³	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m ³

ACGIH TLV: American Conference of Government Industrial Hygienists – Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration – Permissible Exposure Limits Immediately Dangerous to Life or Health

Appropriate engineering controls

Ensure adequate ventilation. Avoid all unnecessary exposure. Personal protective equipment should be selected upon the conditions under which this product is handled or used.

Individual protection measures

Eye Protection

Wear protective eyewear or safety goggles.

Skin and Body Protection

Wear protective gloves and protective clothing. Long-sleeved clothing. Glove material specifications: nitrile or butyl rubber; 0.5mm; ca. 480min.

Respiratory Protection

Hydrogen Peroxide levels greater than 1ppm requires a half-face piece respirator (and appropriate eye protection) with either 3M 6003 or 6006 (organic vapor/acid gas or multi-gas) cartridge in combination with particulate filter (i.e. 5N11 or 5P71).* (* 3M Technical Bulletin #185 and Solvay Chemicals Technical Communications TDS-No. HOOH-PAA-RESP.)

If levels exceed 50 ppm, a full SCBA is necessary. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use.

9 Physical and chemical properties

Physical and chemical properties

Physical State	Liquid
Appearance	Colorless

Odor

Odorless

<u>Property</u>	<u>Values</u>	<u>Remarks/Method</u>
pH	3.0	
Melting / Freezing Point	ca. 0C	
Boiling Point / Boiling Range	>100C	
Flash Point	Not applicable	
Evaporation Rate	No data available	
Flammability (Solid, Gas)	No data available	
Vapor Pressure	23 hPa @ 20C	
Vapor Density	No data available	
Specific Gravity	1 g/cm ³ @ 20C	
Water Solubility	Completely soluble	
Solubility in Other Solvents	No data available	
Partition Coefficient: n-octanol/water	No data available	
Autoignition Temperature	No data available	This product is not self igniting
Decomposition Temperature	No data available	
Kinematic Viscosity	No data available	
Dynamic Viscosity	No data available	
Explosive Properties	No data available	This product is not explosive
Oxidizing Properties	No data available	

10 Stability and reactivity

Reactivity

No information available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No information available

Conditions to avoid

Exposure to extremely high or low temperatures.

Incompatible materials

Acids. Bases. Oxidizing Agents. Organic material, reducing agents, metal salts, readily oxidizable materials such as paper, wood, and sulfur.

Hazardous decomposition products

No hazardous decomposition products known.
Oxygen can be released during decomposition.
No decomposition if used as directed.

11 Toxicological information

Toxicological (health) effects

Acute toxicity/Irritability/Sensation.

Information on the likely routes of exposure

Inhalation	May cause irritation of respiratory tract.
Eye Contact	Moderate eye irritant
Skin Contact	Slight irritant.

Product Information:

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Product	>5000 mg/kg (Rat)	>5000 mg/kg (Rabbit)	= 2 g/m ³ (Rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

May cause temporary skin whiteness. Coughing and/or wheezing. Eye irritant.

Delayed and immediate effects and also chronic effects from short and long term exposure

Sensitization

Guinea Pig, non-sensitizing (skin).

Mutagenic Effects

No information available.

Carcinogenicity

The table below indicate whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrogen Peroxide Cas# 7722-84-1	A3	Group 3		

ACGIH (American Conference of Governmental Industrial Hygienists) A3 – Animal Carcinogen

IARC (International Agency for Research on Cancer) Group 3 – Not classifiable as to Carcinogenicity in Humans

Reproductive Toxicity

No information available.

STOT – Single Exposure

No information available.

STOT- Repeated Exposures

No information available.

Chronic Toxicity

No known effect based on information supplied. Carcinogenic potential in unknown.

Target Organ Effects

Respiratory system. Eyes. Skin. Gastrointestinal tract (GI) Blood. Lungs.

Aspiration Hazard

No information available

Numerical measures of toxicity (such as acute toxicity estimates)

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	801.000 mg/kg bodyweight
ATEmix (dermal)	2000 mg/kg bodyweight
ATEmix (inhalation – gas)	4500.000 ppm V/4 h
ATEmix (inhalation – dust/mist)	2000 mg/l 4 h
ATEmix (inhalation – vapor)	2000. Mg/l 4h ATEmix

12 Ecological information

Toxicity

Chemical Name Hydrogen Peroxide

Toxicity to Algae 72h EC50: 2.5 mg/L

Toxicity to Fish

96h LC50:	16.4 mg/L	(Pimephales promelas)
96h LC50:	18 - 56 mg/L	(Lepomis macrochirus)
96H LC50:	10.0 - 32.0 mg/L	(Oncorhynchus mykiss)

Toxicity to Microorganisms

Daphnia Magna (Water Flea)

48h EC50:	18 - 32 mg/L
24h EC50:	7.7 mg/L

Persistence and degradability

No information available

Bioaccumulative potential

Not established

Mobility in soil

No information available

Other adverse effects

No information available

13 Disposal considerations

Disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging

Dispose of contents/containers in accordance with local regulations.

14 Transport information

UN Number

Not regulated

Transport hazard class(es)

DOT	Not regulated
Proper Shipping Name	Non-regulated
Hazard Class	N/A

TDG	Not regulated
------------	---------------

MEX	Not regulated
------------	---------------

ICAO	Not regulated
-------------	---------------

IATA	Not regulated
Proper Shipping Name	Non-regulated
Hazard Class	N/A

IMDG/IMO	Not regulated
Hazard Class	N/A
Marine Pollutant	N/A

RID	Not regulated
------------	---------------

ADR	Not regulated
------------	---------------

ADN	Not regulated
------------	---------------

15 Regulatory information**Safety, health and environmental regulations specific for the product in question****International Inventories**

TSCA	Complies
-------------	----------

DSL	All components are listed either on the DSI or NDSL.
------------	--

*TSCA – United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL – Canadian Domestic Substances List/Non-Domestic Substances List***US Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No

Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA Reportable Quantities	CWA Toxic Pollutants	CWA Priority Pollutants	CWA Hazardous Substances
Hydrogen Peroxide 7722-84-1	X	X	X	X

16 Other information

Other information

	NFPA	HMIS
Health Hazards	1	1
Flammability	0	0
Instability	0	0
Physical and Chemical Hazards – Personal Protection	X	

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet