



HaloMist™ Safety Data Sheet

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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name HaloMist

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Disinfectant (Aerosol) Surfaces

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Halosil International Inc.

Supplier Address 91 Lukens Drive
New Castle
DE
19720
US

Supplier Phone Number Phone:302-454-8102

Supplier Email sales@halosil.com

Emergency telephone number CHEMTREC US and Canada-1-800-434-9300, Outside US-1-703-527-3887

Company Emergency Phone Number 302-454-8102

2. HAZARDS IDENTIFICATION

Classification

Eye Irrit 2B H320

Eye irritation	Category 2 Sub-category B
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GHS Label elements, including precautionary statements

Emergency Overview		
Signal word	Warning	
Hazard Statements H320-Causes eye irritation		
	GHS07	
Appearance Colorless	Physical state Liquid	Odor Odorless

Precautionary Statements – Prevention

P-280 -Wear Protective gloves/protective clothing and eye/face protection and breathing protection.

P305+ P351 + P338- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

P337+P313- If eye irritation persists: Get medical advice/attention.

Eyes

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 or doctor/physician

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

Other information

Interactions with Other Chemicals

No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%	Trade Secret
Hydrogen peroxide	7722-84-1	5.00	
Silver nitrate	7761-88-8	.01	
Other ingredients		94.99	x

4. FIRST AID MEASURES

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.

Skin contact

Wash off immediately with plenty of water for 15 minutes while removing all contaminated clothes and shoes. Seek immediate medical attention/advice.

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 and effects, both 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 injection: May cause burns or irritation of the linings of the mouth, throat and GI tract.

Indication of any immediate medical attention and special treatment needed

No additional information available

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Unsuitable extinguishing media

CAUTION: Organic compounds. As hydrogen peroxide may react with a variety of organic materials and form explosive mixtures, shock sensitive compounds and initiate fire. Foam is not effective as oxygen and heat continue to be generated under the foam.

Specific hazards arising from the chemical

Hazardous decomposition products in case of fire. : 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.

Advice for firefighters

Firefighting instructions: 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 breathe fumes, vapors. Avoid contact with skin, eyes and clothes
Non-emergency Personnel precautions	Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other Information	Refer to protective measures listed in Sections 7 and 8.
Emergency responders	
Protective equipment:	Equip cleanup crew with proper protection
Emergency procedures:	Stop leak if safe to do so. Evacuate unnecessary personnel. Ventilate area.

Environmental precautions

Environmental precautions	Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
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Methods and material 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. To prevent migration and entry into sewers or streams. 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

Handling	<p>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. Do not wear leather soled shoes.</p> <p>Take care for general hygiene and housekeeping. Wash hands thoroughly after handling. Do not eat drink or smoke when using this product. Contaminated clothing should be washed thoroughly in order to eliminate a delayed potential fire hazard.</p>
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Conditions for safe storage, including any incompatibilities

Storage	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	Acids. Bases. Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogen peroxide 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 Governmental Industrial Hygienists - Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits Immediately Dangerous to Life or Health

Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters

Appropriate engineering controls

Engineering Measures

Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be in the immediate vicinity of any potential exposure. Avoid all unnecessary exposure. Personal protective equipment should be selected upon the conditions under which this product is handled or used.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear protective eyewear. Safety goggles and ½ face or full face respirator.

Skin and body protection

Wear protective gloves and protective clothing. Long sleeved clothing. Neoprene gloves.

Respiratory protection

Hydrogen Peroxide levels between 1 and 10 ppm requires at least 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	Odor	Odorless
Appearance	Colorless	Odor Threshold	No information available
Color	Colorless		
<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	3.0	None known	

Melting / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flash Point	No data available	None known
Evaporation Rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Specific Gravity	No data available	None known
Water Solubility	Completely soluble	None known
Solubility in other solvents	No data available	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Explosive properties	Not explosive	
Oxidizing properties	oxidizer	

Other Information

Softening Point	No data available
VOC Content (%)	No data available
Particle Size	No data available
Particle Size Distribution	

10. STABILITY AND REACTIVITY**Reactivity**

Thermal decomposition generates corrosive vapors.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization

Hazardous polymerization does not occur.

Conditions to avoid

Exposure to extremely high or low temperatures

Incompatible materials

Acids. Bases. Oxidizing agent. Organic materials, reducing agents, metal salts, readily oxidizable materials such as paper, wood, sulfur, copper and it's alloys.

Hazardous Decomposition Products

Oxygen.

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure****Product Information****Inhalation**

May cause irritation of respiratory tract.

Eye contact Moderate eye irritant. (based on product). .

Skin contact Slight irritant. (based on product).

Ingestion

Component 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

Information on toxicological effects

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

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization Guinea Pig, non-sensitizing (skin).

Mutagenic Effects No information available.

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

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrogen peroxide 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 exposure No information available.

Chronic Toxicity No known effect based on information supplied. Carcinogenic potential is unknown.

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

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

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 4h

ATEmix (inhalation-vapor)

2000.mg/l 4h ATEmix

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Toxic to aquatic life.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Hydrogen peroxide 7722-84-1	72h EC50: = 2.5 mg/L (Chlorella vulgaris)	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)		48h EC50: 18 - 32 mg/L 24h EC50: = 7.7 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

Not established

Other adverse effects

No information available.

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****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.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Hydrogen peroxide 7722-84-1	Toxic Corrosive Ignitable Reactive

14. TRANSPORT INFORMATION**DOT**

Proper Shipping Name
Hazard Class

NOT REGULATED
NON REGULATED
N/A

Hydrogen peroxide 7722-84-1		1000 lb (concentration >52%)	
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US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Hydrogen peroxide 7722-84-1	X	X	X	X	
Supplier Trade Secret	X	X	X	X	
Supplier Trade Secret	X	X	X	X	

International Regulations

Mexico

National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Hydrogen peroxide 7722-84-1 (5%)	A3	Mexico: TWA 1 ppm Mexico: TWA 1.5 mg/m ³ Mexico: STEL 2 ppm Mexico: STEL 3 mg/m ³

Mexico - Occupational Exposure Limits - Carcinogens
A3 - Confirmed Animal Carcinogen

16. OTHER INFORMATION

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

Prepared By Halosil International
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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