

Precautionary Statements - Prevention

Use only outdoors or in a well-ventilated area
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Wear respiratory protection
 Wash face, hands and any exposed skin thoroughly after handling
 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Immediately call a poison center or doctor/physician
 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
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a poison center or doctor/physician
 IF SWALLOWED: rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed
 Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Hydrogen Chloride	7647-01-0	15-20

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

General Advice	Provide this SDS to medical personnel for treatment.
Eye Contact	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.
Skin Contact	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician. Wash contaminated clothing before reuse.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
Ingestion	IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

Most important symptoms and effects

Symptoms	May be harmful if swallowed. Causes severe skin burns and eye damage. Toxic if inhaled.
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Indication of any immediate medical attention and special treatment needed**Notes to Physician**

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. In the event of fire and/or explosion do not breathe fumes.

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****Personal Precautions**

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

Environmental Precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up**Methods for Containment**

Prevent further leakage or spillage if safe to do so. Prevent runoff to storm sewers and ditches leading to natural waterways. Dike far ahead of liquid spill for later disposal.

Methods for Clean-Up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Take up mechanically. Place in suitable containers for disposal.

7. HANDLING AND STORAGE**Precautions for safe handling****Advice on Safe Handling**

Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection. Wash face, hands, and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities**Storage Conditions**

Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up. Keep out of the reach of children. Keep in properly labeled containers. Store away from incompatible materials.

Incompatible Materials

Strong acids. Strong bases. Oxidizing agents. Strong reducing agents. Amines. Contact with metals may evolve flammable hydrogen gas.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Hydrogen Chloride 7647-01-0	Ceiling: 2 ppm	(vacated) Ceiling: 5 ppm (vacated) Ceiling: 7 mg/m ³ Ceiling: 5 ppm Ceiling: 7 mg/m ³	IDLH: 50 ppm Ceiling: 5 ppm Ceiling: 7 mg/m ³

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Tight sealing safety goggles. Face shield.

Skin and Body Protection Wear protective gloves and protective clothing.

Respiratory Protection Wear a positive-pressure supplied-air respirator with full facepiece.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Pungent acid odor
Appearance	Clear liquid	Odor Threshold	Not determined
Color	Clear		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	5.3	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	101.7 °C / 215 °F	
Flash Point	Not determined	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	Liquid- Not Applicable	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	Not determined	
Specific Gravity	1.06	
Water Solubility	Completely soluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children. Incompatible Materials.

Incompatible Materials

Strong acids. Strong bases. Oxidizing agents. Strong reducing agents. Amines. Contact with metals may evolve flammable hydrogen gas.

Hazardous Decomposition Products

Hydrogen chloride. Chlorine. Thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes severe eye damage.
Skin Contact	Causes severe skin burns.
Inhalation	Toxic if inhaled.
Ingestion	May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Hydrogen Chloride 7647-01-0	= 700 mg/kg (Rat)	> 5010 mg/kg (Rabbit)	= 3124 ppm (Rat) 1 h

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

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

Carcinogenicity Group 3 IARC components are "not classifiable as human carcinogens".

Chemical Name	ACGIH	IARC	NTP	OSHA
Hydrogen Chloride 7647-01-0		Group 3		

Legend

*IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"*

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Hydrogen Chloride 7647-01-0		282: 96 h Gambusia affinis mg/L LC50 static		

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined.

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Do not reuse container.

US EPA Waste Number

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Octylphenozyppolyethoxyetha nol 9036-19-5		Included in waste stream: K060		

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

UN/ID No UN1789
Proper Shipping Name Hydrochloric acid solution
Hazard Class 8
Packing Group II
Emergency Response Guide Number 157

IATA

UN/ID No UN1789
Proper Shipping Name Hydrochloric acid solution
Hazard Class 8
Packing Group II
ERG Code 8L

IMDG

UN/ID No UN1789
Proper Shipping Name Hydrochloric acid solution
Hazard Class 8
Packing Group II
EmS-No F-A, S-B

RID

UN/ID No UN1789
Proper Shipping Name Hydrochloric acid solution
Hazard Class 8
Packing Group II
Classification Code C1

TDG

UN/ID No UN1789
Proper Shipping Name Hydrochloric acid solution
Hazard Class 8
Packing Group II

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Hydrogen Chloride	Present	X		Present		Present	X	Present	X	X

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
- ENCS - Japan Existing and New Chemical Substances*
- IECSC - China Inventory of Existing Chemical Substances*
- KECL - Korean Existing and Evaluated Chemical Substances*
- PICCS - Philippines Inventory of Chemicals and Chemical Substances*
- AICS - Australian Inventory of Chemical Substances*

US Federal Regulations

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Hydrogen Chloride 7647-01-0	5000 lb	5000 lb	RQ 5000 lb final RQ RQ 2270 kg final RQ

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

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Hydrogen Chloride - 7647-01-0	7647-01-0	15-20	1.0

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant 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 Chloride	5000 lb			X

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
Hydrogen Chloride 7647-01-0	X	X	X

16. OTHER INFORMATION

NFPA	Health Hazards	Flammability	Instability	Special Hazards
	3	0	1	Not determined
HMIS	Health Hazards	Flammability	Physical Hazards	Personal Protection
	3	0	1	Not determined

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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 a 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