SAFETY DATA SHEET

Hydrochloric acid 0.36% - 38%

Section 1. Identification

GHS product identifier	:	Hydrochloric acid 0.36% - 38%
Product code	:	Not available.
Chemical name	:	Hydrochloric acid 0.36% - 38%
Other means of identification	:	Hydrochloric acid 0.36% - 38%
Product type	:	liquid

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

Identified uses
Not applicable.

Uses advised against
Not applicable.

Supplier's details	:	Detrex Chemicals Division 1100 North State Road Ashtabula Ohio - USA 44004 216-749-2605 8:00am - 4:00pm M - F
Emergency telephone number (with hours of operation)	:	For Chemical Emergency Spill, Leak, Fire, Exposure or Accident Call CHEMTREC Day or Night: National contact +1-800-424-9300 International Emergency Telephone number: +1-703-527-3887 (collect call)

Section 2. Hazards identification

OSHA/HCS status	:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	:	CORROSIVE TO METALS - Category 1 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Inhalation) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : May be corrosive to metals.
Causes severe skin burns and eye damage.
Toxic if inhaled.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear protective gloves, protective clothing and eye or face protection. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash thoroughly after handling.

Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse. 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.

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

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Chemical name : Hydrochloric acid 0.36% - 38%

Other means of identification : Hydrochloric acid 0.36% - 38%

Ingredient name	%	Identifiers
Water	>= 62 - <= 99,64	CAS: 7732-18-5
Hydrochloric acid	>= 0,36 - <= 38	CAS: 7647-01-0

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact :

Inhalation : Toxic if inhaled.

Skin contact : Causes severe skin burns and eye damage.
Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following: pain, watering, redness
Inhalation : Adverse symptoms may include the following: respiratory tract irritation, coughing
Skin contact : Adverse symptoms may include the following: pain or irritation, redness, blistering may occur
Ingestion : Adverse symptoms may include the following: stomach pains

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

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, alcohol-resistant foam or water spray (fog).
Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.
Hazardous thermal decomposition products : Decomposition products may include the following materials: Hydrogen chloride (HCl).

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill	:	Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	:	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational	:	Eating, drinking and smoking should be prohibited in areas where this

hygiene material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Hydrochloric acid	**ACGIH TLV (2003-01-01). [Hydrogen chloride] ACGIH Not Classifiable as a Human Carcinogen.** Ceiling-A concentration that should not be exceeded at any time during any part of the working day.: 2 ppm **NIOSH REL (1994-06-01). [HYDROGEN CHLORIDE]** Ceiling-A concentration that should not be exceeded at any time during any part of the working day.: 7 mg/m3 5 ppm **OSHA PEL 1989 (1989-03-01). [Hydrogen chloride]** Ceiling-A concentration that should not be exceeded at any time during any part of the working day.: 7 mg/m3 5 ppm **OSHA PEL (1993-06-30). [Hydrogen chloride]** Ceiling-A concentration that should not be exceeded at any time during any part of the working day.: 7 mg/m3 5 ppm

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Physical state : liquid

Color : Colorless to light yellow.

Odor	:	sharp, irritating
Odor threshold	:	Not available.
pH	:	2
Melting point/freezing point	:	Not available.
Boiling point, initial boiling point, and boiling range	:	Not available.
Flash point	:	Not available.
Evaporation rate	:	Not available.
Flammability	:	Not available.
Lower and upper explosion limit/flammability limit	:	**Lower:** Not available. **Upper:** Not available.
Vapor pressure	:	

Ingredient name	Vapor pressure
water	31,73 hPa (@ 25 °C) (77 °F)

Relative vapor density	:	1,3 [Air = 1] @ 20 °C (68 °F)
Relative density	:	Not available.
Solubility in water	:	Not available.
Partition coefficient: n-octanol/water	:	Not applicable.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	**Dynamic :** Not available. **Kinematic :** Not available.

Particle characteristics

Median particle size	:	Not applicable.

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	Stable under recommended storage and handling conditions (see Section 7).
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
Incompatible materials	:	Attacks many metals producing extremely flammable hydrogen gas

which can form explosive mixtures with air. Reactive or incompatible with the following materials:, alkalis

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
Hydrochloric acid	**Rat - Inhalation - LC50 Gas.** 3124 ppm [1 h]
Water	

Conclusion/Summary[Product] : Toxic if inhaled.

Skin corrosion/irritation

Product/ingredient name	Result
Hydrochloric acid	**Human - Skin - Mild irritant** Duration of treatment/exposure: 24 hrs

Conclusion/Summary[Product] : Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Product/ingredient name	Result
Hydrochloric acid	**Rabbit - Eyes - Mild irritant** Duration of treatment/exposure: 0,008 hrs

Conclusion/Summary[Product] : No known significant effects or critical hazards.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary[Product] : No known significant effects or critical hazards.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary[Product] : No known significant effects or critical hazards.

Respiratory

Conclusion/Summary[Product] : No known significant effects or critical hazards.

Germ cell mutagenicity

Not available.

Conclusion/Summary[Product] : No known significant effects or critical hazards.

Carcinogenicity

Not available.

Conclusion/Summary[Product] : No known significant effects or critical hazards.

Reproductive toxicity

Not available.

Conclusion/Summary[Product] : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact	:	
Inhalation	:	Toxic if inhaled.
Skin contact	:	Causes severe skin burns and eye damage.
Ingestion	:	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	Adverse symptoms may include the following: pain, watering, redness
Inhalation	:	Adverse symptoms may include the following: respiratory tract

irritation, coughing

Skin contact : Adverse symptoms may include the following: pain or irritation, redness, blistering may occur

Ingestion : Adverse symptoms may include the following: stomach pains

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

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary[Product] : No known significant effects or critical hazards.

General : No known significant effects or critical hazards.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral	Dermal	Inhalation (gases)	Inhalation (vapors)	Inhalation (dusts and mists)
Hydrochloric acid 0.36% - 38%	N/A	N/A	1562 ppm	N/A	N/A
Hydrochloric acid	N/A	N/A	1562 ppm	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result
Hydrochloric acid 0.36% - 38%	**Remarks:** No known significant effects or critical hazards.
Hydrochloric acid	**Acute LC50 Fresh water** Fish - *Gambusia affinis* 282 mg/l [96 h] **Acute LC50 Marine water** Crustaceans - *Carcinus maenas* 240 mg/l [48 h]

Conclusion/Summary[Product] : Not available.

Persistence and degradability

Not available.

Conclusion/Summary[Product] : Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/Water partition coefficient : Not available.

Other adverse effects

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN1789	UN1789	UN1789	UN1789	UN1789
UN proper shipping name	HYDROCHLORIC ACID (Hydrogen chloride)	HYDROCHLORIC ACID	HYDROCHLORIC ACID	HYDROCHLORIC ACID	HYDROCHLORIC ACID
Transport hazard class(es)	8 	8 	8 	8 { error: file not found: C:\WWI\graphics\ <** Phrase graphic not available: [EN] CUST-AT1QU:SHE9:7T4 **> }	8 
Packing group	II	II	II	II	II
Environmental hazards	No.	No.	No.	No.	No.

DOT Classification : **Reportable quantity** 13157,9 lb / 5973,7 kg. The classification of the product is due solely to the presence of one or more US DOT-listed 'Hazardous substances' that are subject to reportable quantity requirements and only applies to shipments of packages greater than, or equal to, the product reportable quantity. Package sizes less than the product reportable quantity are not regulated as hazardous materials.

IMDG : **Emergency schedules (EmS)** F-A, S-B

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption:** Not determined
EPA Clean water act (CWA) section 311 - Hazardous substances: Hydrochloric acid;
EPA Clean air act (CAA) section 112 - Accidental release prevention - Toxic substances: Hydrogen chloride

(anhydrous)Hydrochloric acid (conc 37% or greater)Hydrochloric acid;

TSCA 12(b) - Chemical export notification
Not applicable.

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302/304
HYDROGEN CHLORIDE (GAS ONLY)	>= 25 - <= 50	Yes.	**SARA 304 RQ:** 5000 lb(s) **SARA 302 TPQ:** 500 lb(s)

SARA 304 RQ : 13157,9 lbs

SARA 311/312

Classification : ACUTE TOXICITY - inhalation - Category 3
SKIN CORROSION - Category 1
SERIOUS EYE DAMAGE - Category 1

Composition/information on ingredients

Name	%	Classification
Hydrochloric acid	>= 25 - <= 50	ACUTE TOXICITY - inhalation - Category 3 EYE IRRITATION - Category 2B

SARA 313

Form R - Reporting requirements

Product name	CAS number	%
Hydrochloric acid	7647-01-0	>= 25 - <= 50

Supplier notification

Product name	CAS number	%
Hydrochloric acid	7647-01-0	>= 25 - <= 50

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed:
Hydrochloric acid

New York : The following components are listed:
Hydrochloric acid

New Jersey : The following components are listed:
HYDROGEN CHLORIDE

Pennsylvania : The following components are listed:
HYDROCHLORIC ACID

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Chemical Weapons Convention List Schedule I Chemicals
None of the components are listed.

Chemical Weapons Convention List Schedule II Chemicals
None of the components are listed.

Chemical Weapons Convention List Schedule III Chemicals
None of the components are listed.

Montreal Protocol
None of the components are listed.

Stockholm Convention on Persistent Organic Pollutants

Annex A - Elimination - Production
None of the components are listed.

Annex A - Elimination - Use
None of the components are listed.

Annex B - Restriction - Production
None of the components are listed.

Annex B - Restriction - Use
None of the components are listed.

Annex C - Unintentional - Production
None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Rotterdam Convention on Prior Informed Consent (PIC) - Industrial
None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC) - Pesticide
None of the components are listed.

Rotterdam Convention on Prior Informed Consent (PIC) -Severely hazardous pesticide
None of the components are listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Heavy metals - Annex 1
None of the components are listed.

POPs - Annex 1 - Production
None of the components are listed.

POPs - Annex 1 - Use
None of the components are listed.

POPs - Annex 2
None of the components are listed.

POPs - Annex 3
None of the components are listed.

Inventory list

Australia	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Eurasian Economic Union	:	**Russian Federation inventory:** All components are listed or exempted.
Japan	:	**Japan inventory (CSCL)**: All components are listed or exempted. **Japan inventory (ISHL)**: All components are listed or exempted.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	Please contact your supplier for information on the inventory status of

this material.

Taiwan	:	All components are listed or exempted.
Thailand	:	All components are listed or exempted.
Turkey	:	Not determined.
United States	:	All components are active or exempted.
Viet Nam	:	All components are listed or exempted.

Section 16. Other information

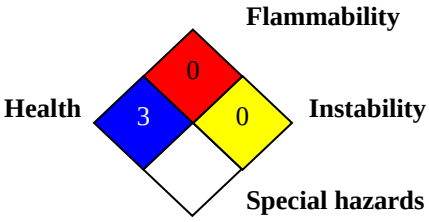
Hazardous Material Information System (U.S.A.)

Health	/	3
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)



Procedure used to derive the classification

Classification	Justification
CORROSIVE TO METALS - Category 1	On basis of test data
SKIN CORROSION - Category 1A	On basis of test data
SERIOUS EYE DAMAGE - Category 1	
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Inhalation) - Category 3	On basis of test data

History

Date of printing : 08/27/2025

Version: *1.1* ***Date of issue/Date of revision:*** *08/27/2025* ***Date of previous issue:*** *09/20/2022*

Date of issue/Date of revision	:	08/27/2025
Date of previous issue	:	09/20/2022
Version	:	1.1
Prepared by	:	STERKENBURGC
Key to abbreviations	:	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor DOT = Department of Transportation GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group TDG = Transportation of Dangerous Goods UN = United Nations
References	:	Not available.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.