SAFETY DATA SHEET

Preparation Date: 7/13/2015 **Revision date** 11/14/2019 **Revision Number:** G4

1. IDENTIFICATION

Product identifier

Product code: H-145
Product Name: HYDROCHLORIC ACID, 2.0 N SOLUTION

Other means of identification
Synonyms: No information available
CAS #: Mixture
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use
Recommended use: No information available.
Uses advised against No information available

Supplier:
Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: https://www.spectrumchemical.com
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Tom Tyner (USA - West Coast)
Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Corrosive to metals	Category 1

Label elements

Danger

Hazard statements
Causes severe skin burns and eye damage
May cause respiratory irritation
May be corrosive to metals

Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
Not available

Precautionary Statements - Prevention
Do not breathe mist or vapors
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Use only outdoors or in a well-ventilated area
Keep only in original container

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

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed
Store in corrosive resistant/ .? container with a resistant inner liner

Precautionary Statements - Disposal
Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%
Water	7732-18-5	92.5-93
Hydrogen chloride	7647-01-0	7.0-7.5

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you

have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact: Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.

Eye Contact: Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. WARNING! It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. Call a physician immediately.

Ingestion: Do not induce vomiting without medical advice. Do not give Sodium Bicarbonate (Baking Soda). Never give anything by mouth to an unconscious person. If victim is conscious, give water or milk. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Symptoms

Severe skin and eye irritation or burns
Irritating to respiratory system
Burning sensation of the respiratory tract
May cause chemical burns to the respiratory tract
Coughing
Hoarseness of the voice
Shallow respiration
Causes digestive (gastrointestinal) tract irritation
May cause gastrointestinal (digestive) tract burns
Can burn mouth, throat, and stomach
May cause salivation
Thirst
May cause difficulty swallowing
May cause abdominal pain, nausea, vomiting, diarrhea
Weak, rapid pulse or rapid heart rate (Tachycardia)
It may affect the kidneys
Discoloration and excessive decay of teeth
May cause inflammation of the lungs (pneumonitis)
May cause inflammation and edema of the larynx and bronchi

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders
First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous combustion products No information available.

Specific hazards For Hydrogen chloride/concentrated Hydrochloric acid:. Contact with metals may evolve flammable hydrogen gas. Calcium carbide reacts with hydrogen chloride gas with incandescence. Uranium phosphide reacts with hydrochloric acid to release spontaneously flammable phosphine. Rubidium acetylene carbide burns with slightly warm Hydrochloric acid. Lithium silicide in contact with hydrogen chloride becomes incandescent. When dilute hydrochloric acid is used, gas that is spontaneously flammable in air is evolved. Magnesium boride treated with concentrated hydrochloric acid produces spontaneously flammable gas. Cesium acetylene carbide burns in hydrogen chloride gas. Cesium carbide ignites in contact with Hydrochloric acid unless acid is dilute. Hydrogen chloride in contact with the following can cause an explosion or ignition on contact, or other violent/vigorous reaction: Acetic anhydride AgClO + CCl4 Alcohols + hydrogen cyanide, Aluminum Aluminum-titanium alloys (with HCl vapor), 2-Amino ethanol, Ammonium hydroxide, Calcium carbide Ca3P2 Chlorine + dinitroanilines (evolves gas), Chlorosulfonic acid Cesium carbide Cesium acetylene carbide, 1,1-Difluoroethylene Ethylenediamine, Ethyleneimine, Fluorine, HClO4 Hexalithium disilicide H2SO4 Metal acetylides or carbides, Magnesium boride, Mercuric sulfate, Oleum, Potassium permanganate, beta-Propiolactone Propylene oxide Rubidium carbide, Rubidium, acetylene carbide Sodium (with aqueous HCl), Sodium hydroxide Sodium tetraselenium, Sulfonic acid, Tetraselenium tetranitride, U3P4 , Vinyl acetate. Silver perchlorate with carbon tetrachloride in the presence of hydrochloric acid produces trichloromethyl perchlorate which detonates at 40 deg. C.

Special Protective Actions for Firefighters

Specific Methods: No information available

Special Protective Equipment 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: Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk.

Methods for cleaning up Neutralize with Sodium carbonate or Sodium bicarbonate. Dilute with water. Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:
Use only in area provided with appropriate exhaust ventilation. Keep away from incompatible materials.

Safe Handling Advice:
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. May corrode metallic surfaces. Do not store in uncoated metallic containers. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:
Metals
Bases
Oxidizing agents
Organic materials
Cyanides

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Water	7732-18-5	None	None	None	None
Hydrogen chloride	7647-01-0	5 ppm Ceiling 7 mg/m³ Ceiling	5 ppm Ceiling 7 mg/m³ Ceiling	2 ppm Ceiling	None

Canada

Component	CAS No	Canada - Alberta	Canada - British	Canada - Ontario	Canada - Quebec

			Columbia		
Water	7732-18-5	None	None	None	None
Hydrogen chloride	7647-01-0	2 ppm Ceiling 3 mg/m³ Ceiling	2 ppm Ceiling	2 ppm Ceiling	5 ppm Ceiling 7.5 mg/m³ Ceiling

Australia and Mexico

Component	CAS No	Australia	Mexico
Water	7732-18-5	None	None
Hydrogen chloride	7647-01-0	None	5 ppm Ceiling 7 mg/m³ Ceiling

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Face-shield. or Goggles

Skin and body protection: Gloves
Chemical resistant apron
Long sleeved clothing
If working with large quantities:
Chemical resistant protective suit
Boots

Respiratory protection: Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:
Liquid

Appearance:
Clear.

Color:
Colorless to pale yellow.

Odor:
Slight. Pungent. Irritating.

Taste
No information available.

Formula
No information available

Molecular/Formula weight (g/mole):
No information available

Flammability (solid, gas)
no data available

Flashpoint (°C/°F):
No information available

Flash Point Tested according to:
Not available

Autoignition Temperature (°C/°F):
No information available

Lower Explosion Limit (%):
No information available

Upper Explosion Limit (%):
No information available

Melting point/range(°C/°F):
No information available

Decomposition temperature(°C/°F):
No information available

Boiling point/range(°C/°F):
No information available

Bulk density:
No information available

Density (g/cm3):
No information available

Specific gravity:

1.03-1.04	**pH** No information available	**Vapor pressure @ 20°C (kPa):** No information available
Evaporation rate: No information available	**Vapor density:** No information available	**VOC content (g/L):** No information available
Odor threshold (ppm): No information available	**Partition coefficient (n-octanol/water):** No information available	**Viscosity:** No information available
Miscibility: No information available	**Solubility:** Soluble in Ether Soluble in Water Soluble in Methanol Soluble in Ethanol	

10. STABILITY AND REACTIVITY

Reactivity

For Hydrogen chloride or concentrated Hydrochloric Acid:
Reacts with most metals to produce flammable Hydrogen gas.
Sodium reacts very violently with gaseous hydrogen chloride.
Calcium phosphide and Hydrochloric acid undergo a very energetic reaction.
Hydrogen chloride reacts with oxidizers releasing chlorine gas.
Hydrogen chloride gas is emitted when Hydrochloric acid comes in contact with Sulfuric acid.
Adsorption of Hydrochloric acid onto Silicon dioxide results in exothermic reaction.
Hydrogen chloride causes aldehydes and epoxides to violently polymerize.
Reacts violently with bases, oxidizers forming toxic chlorine gas.
Reacts, often violently or vigorously or exothermically, with acetic anhydride, active metals, aliphatic amines, alkanolamines, alkylene oxides, aromatic amines, amides, 2-aminoethanol, ammonia, ammonium hydroxide, calcium phosphide, chlorosulfonic acid, ethylene diamine, ethyleneimine, epichlorohydrin, isocyanates, metal acetylides, oleum, organic anhydrides, perchloric acid, 3-propiolactone, uranium phosphide, sulfuric acid, vinyl acetate, vinylidene fluoride, alcohols + hydrogen cyanide, Aluminum phosphide, Aluminum-titanium alloys, 2-Amino ethanol, Ammonium hydroxide, Ammonium, 1,4-Benzoquinone diimine, Cesium telluroacylated, Chlorine + dinitroanilines, Chloroacetaldehyde oxime, Cyanogen chloride, 1,1-Difluoroethylene, dinitroanilines, Ethylene, Ethyl 2-formylpropionate oxime, Hexalithium disilicide, Hydrogen peroxide, Methyl vinyl ether, Nitric acid + glycerol, Potassium, Potassium permanganate, beta-Propiolactone, Propylene oxide, Rubidium acetylide, Silver chlorite, Sodium 2-allyloxy-6-nitrophenylpyruvate oxime, Sodium hydroxide, Sodium teranitride, 2,4,6-Tri(2-acetylhydrazino)-1,3,5-trinitrobenzene, Sulfonic acid, Cesium cyanotridecahydrodecarborate(2-), Potassium ferricyanide, Vinylidene fluoride, Potassium ferrocyanide, Ammonium hexacyanoferrate (II).
Reaction with oxidizers such as permanganates, chlorates, chlorites, and hypochlorites may produce chlorine or bromine gas.
Reacts vigorously with alkalies and with many organic materials.
Cesium acetylene carbide burns in hydrogen chloride gas.
Lithium silicide in contact with hydrogen chloride becomes incandescent.
Magnesium boride in contact with concentrated hydrochloric acid produces spontaneously flammable gas.
Rubidium acetylene carbide burns with slightly warm hydrochloric acid.
Rubidium carbide ignites in contact with hydrochloric acid unless acid is dilute.
Uranium phosphide reacts with hydrochloric acid to release spontaneously flammable phosphine.
Calcium carbide reacts with hydrogen chloride gas with incandescence.
Absorption of gaseous hydrogen chloride on mercuric sulfate becomes violent @ 125 deg C.
Reaction of silver perchlorate with carbon tetrachloride in presence of small amount of hydrochloric acid produces trichloromethyl perchlorate, which detonates @ 40 deg C.
Cesium carbide ignites in contact with hydrochloric acid unless acid is dilute.
Hydrochloric acid in the presence of alcohol and glycols results in dehydration reactions.
Hydrogen chloride gas can react with formaldehyde to form bis(chloromethyl)ether, a human carcinogen.
Exothermic reaction with water
Attacks some plastics, rubber, and coatings.

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials.

Incompatible Materials:
Metals
Bases
Oxidizing agents
Organic materials
Cyanides

Hazardous decomposition products: No information available.

Other Information

Corrosivity:
Severe corrosive effect on 304 Stainless Steel
Severe corrosive effect on 316 Stainless Steel
Severe corrosive effect on Copper and copper alloys
Severe corrosive effect on Bronze
Severe corrosive effect on Brass

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Skin. Inhalation. Ingestion.

Acute Toxicity

Component Information

Water	
CAS No	7732-18-5

LD50/oral/rat = > 90 mL/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = No information available

Hydrogen chloride	
CAS No	7647-01-0

LD50/oral/rat = 238 - 277 mg/kg Oral LD50 Rat
700 mg/kg (test substance: 31.5% hydrochloric acid solution)
LD50/oral/mouse = No information available
LD50/dermal/rabbit = >5010 mg/kg (Test substance: 31.5% hydrochloric acid solution - from European Chemicals Bureau IUCLID dataset)
LD50/dermal/rat = No information available
LC50/inhalation/rat = 3124 ppm Inhalation LC50 Rat 1 h
1562 ppm 4 h
1.68 mg/L Inhalation LC50 Rat 1h
LC50/inhalation/mouse = 1108 ppm 1 h
Other LD50 or LC50information = 900 mg/kg oral LD50 Rabbit (no information on test substance)

Product Information

LD50/oral/rat =
Value - Acute Toxicity = No information available

LD50/oral/mouse =
Value - Acute Tox = No information available

LD50/dermal/rabbit
Value - Acute Toxicity = No information available

LD50/dermal/rat
VALUE - Acute Tox = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:	Causes severe irritation and burns.
Eye Contact:	Causes severe irritation and burns.
Inhalation	Irritating to respiratory system. Can cause a burning sensation in the nose, throat and larynx, coughing, sneezing, hoarseness of voice. It may cause inflammation of the respiratory tract. May cause chemical burns to the respiratory tract. May cause inflammation and edema of the larynx and bronchi. It may cause pulmonary edema. May cause chemical pneumonitis. It may affect the liver.
Ingestion	Causes digestive (gastrointestinal) tract irritation and can cause burns of digestive (gastrointestinal) tract. Can cause thirst, difficulty swallowing, salivation, nausea, diarrhea, and vomiting. May affect behavior (excitement), respiration (shallow respiration), the cardiovascular system (weak pulse, tachycardia), and urinary system (kidneys - nephritis, renal failure). It can also cause erosion of tooth enamel.
Aspiration hazard	No information available.

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

Chronic Toxicity	Prolonged or repeated inhalation and/or ingestion may affect liver, and cause bleeding of nose and gums, nasal and oral mucosal ulceration, conjunctivitis. It may also affect respiratory tract (changes in pulmonary function, chronic bronchitis, overt respiratory tract abnormalities), teeth (yellowing of teeth and erosion of tooth enamel), kidneys, and behavior/central nervous system (muscle contraction or spasticity).Prolonged or repeated skin contact may cause dermatitis.Prolonged or repeated eye contact with vapor/mist can cause conjunctivitis.
Sensitization:	No information available.

Mutagenic Effects: For Hydrogen Chloride/Hydrochloric Acid:
Animal experiments showed mutagenic effects
Cytogenetic Analysis - chromosome aberration test (Chinese Hamster ovary):
Genotoxic effects were observed

Carcinogenic effects: Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Hydrogen chloride	7647-01-0	Group 3 - Not classifiable - Monograph 54 [1992]	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information on developmental toxicity effects on humans was found
An increase in postnatal mortality was seen in experiments where rats were exposed to Hydrogen Chloride for 1 hour
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure respiratory system. lungs.
STOT - repeated exposure No information available.
Target Organs: Skin. Eyes. Respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Hydrogen chloride - 7647-01-0
Fish 282 mg/L LC50 Gambusia affinis 96 h
862 mg/L LC50 Leuciscus idus
Crustacea <56 mg/L LC50 Daphnia magna 72h

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility in soil No information available
Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Water	7732-18-5	None	None	None	None
Hydrogen chloride	7647-01-0	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No:	UN1789
Proper Shipping Name:	Hydrochloric acid, solution
Hazard Class	8
Subsidiary Class	No information available
Packing group:	II
Emergency Response Guide Number	157
Marine Pollutant	No data available
DOT RQ (lbs):	No information available
Special Provisions	A3, A6, B3, B15, IB2, N41, T8, TP2
Symbol(s):	No information available
Description:	UN1789, Hydrochloric acid solution, 8, II

TDG (Canada)

UN-No:	UN1789
Proper Shipping Name:	Hydrochloric acid, solution
Hazard Class	8
Subsidiary Risk:	No information available
Packing Group:	II
Marine Pollutant	No Information available
Description:	UN1789, Hydrochloric acid solution, 8, II

ADR

UN Number	UN1789
Proper Shipping Name:	Hydrochloric acid, solution
Transport hazard class(es)	8
Packing group	II
Subsidiary Risk:	No information available
Special Provisions	520
Description:	UN1789, Hydrochloric acid solution, 8, II

IMDG

UN-No:	UN1789
Proper Shipping Name:	Hydrochloric acid, solution
Hazard Class:	8
Subsidiary Risk:	No information available
Packing Group:	II
Marine Pollutant	No information available
EMS:	F-A

Description UN1789, Hydrochloric acid solution, 8, II

RID

UN Number UN1789
Proper Shipping Name: Hydrochloric acid, solution
Transport hazard class(es) 8
Subsidiary Risk: 8
Packing group II
Special Provisions 520
Description: UN1789, Hydrochloric acid solution, 8, II

ICAO (air)

UN-No: UN1789
Proper Shipping Name: Hydrochloric acid, solution
Hazard Class 8
Subsidiary Risk: No information available
Packing Group: II
Description: UN1789, Hydrochloric acid solution, 8, II
Special Provisions A3

IATA

UN Number UN1789
Proper Shipping Name: Hydrochloric acid, solution
Transport hazard class(es) 8
Subsidiary Risk: No information available
Packing group II
Precautionary Statements - Response 8L
Special Provisions No information available
Description: UN1789, Hydrochloric acid solution, 8, II

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
Water	7732-18-5	PresentACTIVE	Present KE-35400	Present	Not present	Present	Present	Present 231-791-2
Hydrogen chloride	7647-01-0	PresentACTIVE	Present KE-20189	Present	Present (1)-215	Present	Present	Present 231-595-7

U.S. Regulations

Hydrogen chloride

Massachusetts RTK: Present
Massachusetts EHS: extraordinarily hazardous
New Jersey RTK Hazardous Substance List: 1012
New Jersey (EHS) List: 1012 500 lb TPQ
2909 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
New Jersey TCPA - EHS: 15000lbTQ
5000lbTQ
5600lbTQ
2000lbTQ
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Michigan PSM HHC: = 5000 lb TQ
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:

5000 lb RQ
100 lb RQ
Louisana Reportable Quantity List for Pollutants: 5000lbfinal RQAs listed in 40 CFR 117.3 Table 117.3 and 40 CFR 302.4 Table 302.4
2270kgfinal RQAs listed in 40 CFR 117.3 Table 117.3 and 40 CFR 302.4 Table 302.4
5000lbRQAs listed in Louisiana Administrative Code, Title 33, Part 1, Subpart 2, Chapter 39, Subchapter E. Applies to unauthorized emissions based on total mass emitted into or onto all media within any consecutive 24-hour period
1000lbRQAs listed in Louisiana Administrative Code, Title 33, Part 1, Subpart 2, Chapter 39, Subchapter E. Applies to unauthorized emissions based on total mass emitted into the atmosphere
California Directors List of Hazardous Substances: Present
FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 182.1057

FDA - 21 CFR - Total Food Additives 133.129, 155.191, 155.194, 160.105, 160.185, 172.560, 172.892, 182.1057
- List Sourced from EAFUS

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Water	7732-18-5	Not Listed	Not Listed	Not Listed	Not Listed
Hydrogen chloride	7647-01-0	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Water	7732-18-5	None	None	None	None	None
Hydrogen chloride	7647-01-0	5000 lb final RQ 2270 kg final RQ	5000 lb EPCRA RQ	None	None	1.0 % de minimis concentration

U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Water	7732-18-5	Not Applicable	Not Applicable
Hydrogen chloride	7647-01-0	Not Applicable	Not Applicable

Canada

WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information: .

Component
Water
7732-18-5 (92.5-93)
Hydrogen chloride
7647-01-0 (7.0-7.5)

WHMIS 2015 Hazard Classification
Not a dangerous product according to HPR classification criteria

Hydrogen Chloride: Gases under pressure - Liquefied gas: H280 Contains gas under pressure, may explode when heated.; Corrosive to Metals - Category 1: H290 May be corrosive to metals. (potentially corrosive to metals; the supplier should be contacted for more information); Acute toxicity - Inhalation - Category 3: H331 Toxic if inhaled.; Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation -

Category 1: H318 Causes serious eye damage.
Hydrochloric Acid: Corrosive to Metals - Category 1: H290 May be corrosive to metals. (potentially corrosive to metals; the supplier should be contacted for more information); Acute toxicity - Oral - Category 4: H302 Harmful if swallowed. (3.6% in aqueous solution); Acute toxicity - Inhalation - Category 2: H330 Fatal if inhaled.; Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Skin corrosion/irritation - Category 2: H315 Causes skin irritation. (3.6% in aqueous solution); Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.; Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation. (3.6% in aqueous solution)

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Water	7732-18-5	Present	Not Listed
Hydrogen chloride	7647-01-0	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Water	7732-18-5	Not listed
Hydrogen chloride	7647-01-0	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Water	7732-18-5	Not listed
Hydrogen chloride	7647-01-0	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Water	7732-18-5	
Hydrogen chloride	7647-01-0	Hydrogen Chloride: Gases under pressure: H280 Contains gas under pressure, may explode when heated.; Acute toxicity - Inhalation - Acute Tox. 3: H331 Toxic if inhaled. (Minimum classification); Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage.017-002-00-2 Hydrochloric Acid: Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage. (C >= 25 %); Specific target organ toxicity - Single exposure - STOT SE 3: H335 May cause respiratory irritation. (C >= 10 %)017-002-01-X Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage. (C >= 25 %); Skin corrosion/irritation - Skin Irrit. 2: H315 Causes skin irritation. (10 % <= C <25 %); Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye

		irritation. (10 % <= C <25 %); Specific target organ toxicity - Single exposure - STOT SE 3: H335 May cause respiratory irritation. (C >= 10 %)017-002-01-X

EU - CLP (1272/2008)

R-phrase(s)
R35 - Causes severe burns
R41 - Risk of serious damage to eyes

S -phrase(s)
S 7 - Keep container tightly closed.
S36 - Wear suitable protective clothing
S39 - Wear eye/face protection
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
S38 - In case of insufficient ventilation, wear suitable respiratory equipment
S 1/2 - Keep locked up and out of the reach of children.

Component	CAS No	**Classification**	**Concentration Limits:**	**Safety Phrases**
Water	7732-18-5		No information	
Hydrogen chloride	7647-01-0	Hydrogen Chloride T; R23 C; R35 Hydrochloric Acid: + hydrochloric acid ...% C; R34 - Xi; R37 Concentration Limit(s): C >= 25 % C; R34-37 10 % <= C < 25 % Xi; R36/37/38	Hydrogen Chloride: 0.02%<=C<0.2% Xi;R36/37/38 0.2%<=C<0.5% C;R34 0.5%<=C<1% C;R20-34 1%<=C<5% C;R20-35 5%<=C T;C;R23-35	For Hydrogen Chloride: S1/2 S9 S26 S36/37/39 S45 Hydrochloric Acid: S(1/2)-S26-S45

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
C - Corrosive

16. OTHER INFORMATION

Preparation Date: 7/13/2015
Revision date 11/14/2019
Prepared by: Sonia Owen

Disclaimer: All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may

pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet