HYDROGEN CHLORIDE (5-<7.8%), HYDROGEN (<=2.9%) in ARGON, HELIUM, KRYPTON, NEON, NITROGEN or XENON

Safety Data Sheet

1. IDENTIFICATION

Product identifier
Product Name
HYDROGEN CHLORIDE (5-<7.8%), HYDROGEN (<=2.9%) in ARGON, HELIUM, KRYPTON, NEON, NITROGEN or XENON

Other means of identification
Safety data sheet number
LIND-M0108
UN/ID no.
UN1956

Recommended use of the chemical and restrictions on use
Recommended Use
Industrial and professional use.
Uses advised against
Consumer use

Details of the supplier of the safety data sheet
Linde Gas North America LLC - Linde Merchant Production Inc. - Linde LLC
575 Mountain Ave.
Murray Hill, NJ 07974
Phone: 908-464-8100
www.lindeus.com

Linde Gas Puerto Rico, Inc.
Road 869, Km 1.8
Barrio Palmas, Catano, PR 00962
Phone: 787-641-7445
www.pr.lindegas.com

Linde Canada Limited
5860 Chedworth Way
Mississauga, Ontario L5R 0A2
Phone: 905-501-1700
www.lindecanada.com

* May include subsidiaries or affiliate companies/ divisions.

For additional product information contact your local customer service.

Emergency telephone number
Company Phone Number
800-232-4726 (Linde National Operations Center, US)
905-501-0802 (Canada)
CHEMTREC: 1-800-424-9300 (North America) +1-703-527-3887 (International)
2. HAZARDS IDENTIFICATION

Classification

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

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
<th>Sub-category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/ irritation</td>
<td>Category 1</td>
<td>Sub-category A</td>
</tr>
<tr>
<td>Serious eye damage/ eye irritation</td>
<td>Category 1</td>
<td></td>
</tr>
<tr>
<td>Gases under pressure</td>
<td>Compressed gas</td>
<td></td>
</tr>
</tbody>
</table>

Label elements

Signal word
Danger

Hazard Statements
Contains gas under pressure; may explode if heated
Causes severe skin burns and eye damage
Corrosive to the respiratory tract

Precautionary Statements - Prevention
Do not handle until all safety precautions have been read and understood
Use and store only outdoors or in a well ventilated place
Do not get in eyes, on skin, or on clothing
Wear protective gloves, protective clothing, eye protection, and/ or face protection
Use a backflow preventive device in piping
Use only with equipment of compatible materials of construction and rated for cylinder pressure
Close valve after each use and when empty

Precautionary Statements - Response
If INHALED: Remove person to fresh air and keep comfortable for breathing. 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 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

Precautionary Statements - Storage
Store locked up
Protect from sunlight when ambient temperature exceeds 52°C/ 125°F

Precautionary Statements - Disposal
Dispose of contents/ containers in accordance with container supplier/ owner instructions
Hazards not otherwise classified (HNOC)
Not applicable

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Volume %</th>
<th>Chemical Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xenon</td>
<td>7440-63-3</td>
<td>0-99</td>
<td>Xe</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>7727-37-9</td>
<td>0-99</td>
<td>N₂</td>
</tr>
<tr>
<td>Neon</td>
<td>7440-01-9</td>
<td>0-99</td>
<td>Ne</td>
</tr>
<tr>
<td>Krypton</td>
<td>7439-90-9</td>
<td>0-99</td>
<td>Kr</td>
</tr>
<tr>
<td>Helium</td>
<td>7440-59-7</td>
<td>0-99</td>
<td>He</td>
</tr>
<tr>
<td>Argon</td>
<td>7440-37-1</td>
<td>0-99</td>
<td>Ar</td>
</tr>
<tr>
<td>Hydrogen chloride</td>
<td>7647-01-0</td>
<td>5-&lt;7.8</td>
<td>HCl</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>1333-74-0</td>
<td>&lt;=2.9</td>
<td>H₂</td>
</tr>
</tbody>
</table>

Composition covers range of mixtures that fall within the same hazard classifications.

### 4. FIRST AID MEASURES

**Description of first aid measures**

**General advice**
Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Inhalation**
Remove to fresh air and keep comfortable for breathing. If breathing has stopped, give artificial respiration. Get medical attention immediately. If breathing is difficult, give oxygen.

**Skin contact**
Immediately flush skin with plenty of water for at least 30 minutes. Remove contaminated clothing and shoes. Immediate medical attention is required.

**Eye contact**
Immediately flush eyes with running water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open while rinsing. Do not rub affected area. Immediate medical attention is required.

**Ingestion**
Not an expected route of exposure.

**Self-protection of the first aider**
RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Use personal protective equipment. Avoid contact with skin, eyes or clothing.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**
Inhalation of corrosive fumes/ gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. May cause burns of eyes, skin and mucous membranes.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians**
Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

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

**Specific extinguishing methods**
Continue to cool fire exposed cylinders until flames are extinguished. Damaged cylinders should be handled only by specialists.

**Specific hazards arising from the chemical**
Non-flammable gas. The product causes burns of eyes, skin and mucous membranes. Highly soluble in water will react to yield dense, acrid HCL fumes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Cylinders may rupture under extreme heat.

**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. Corrosive hazard. Wear chemically protective gloves/clothing and eye/face protection.

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**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions**
Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation, especially in confined areas. Monitor oxygen level. Monitor concentration of released product. Use personal protection recommended in Section 8. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

**Environmental precautions**
Prevent spreading of vapors through sewers, ventilation systems and confined areas. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. See Section 12 for additional ecological information.

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

**Methods for containment**
Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. If leak is in container or container valve, contact the appropriate emergency telephone number in Section 1 or call your closest Linde location.

**Methods for cleaning up**
Return cylinder to Linde or an authorized distributor.

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**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling**
Many metals corrode rapidly with wet hydrogen chloride.

Protect cylinders from physical damage: do not drag, roll, slide or drop. When moving cylinders, even for short distance, use a cart designed to transport cylinders. Never attempt to lift a cylinder by its valve protection cap. Use an adjustable strap wrench to remove over-tight or rusted caps. Never insert an object (e.g. wrench, screwdriver, pry bar, etc.) into valve cap openings. Doing so may damage valve, causing leak to occur. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. Use only with adequate ventilation. Use a backflow preventive device in piping. Use only with equipment rated for cylinder pressure. Close valve after each use and when empty. Never attempt to refill a compressed gas cylinder without the owner's written consent. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit.

Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Ensure the complete gas system has been checked for leaks before use.
Only experienced and properly instructed persons should handle gases under pressure. Always store and handle compressed gas cylinders in accordance with Compressed Gas Association, pamphlet CGA-P1, Safe Handling of Compressed Gases in Containers.

### Conditions for safe storage, including any incompatibilities

#### Storage Conditions
Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Keep at temperatures below 52°C / 125°F. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Stored containers should be periodically checked for general condition and leakage.

#### Incompatible materials

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

##### Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td>Ceiling: 2 ppm</td>
<td>Ceiling: 5 ppm</td>
<td>Ceiling: 7 mg/ m³</td>
</tr>
</tbody>
</table>

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

##### Other Information
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

##### Appropriate engineering controls

#### Engineering Controls
Showers. Eyewash stations. Ventilation systems. Exhaust gas should be vented to a gas treatment system. Consider installation of leak detection systems in areas of use and storage. Systems under pressure should be regularly checked for leakages.

##### Individual protection measures, such as personal protective equipment

#### Eye/ face protection
Tightly fitting safety goggles. Face protection shield.

#### Skin and body protection
Work gloves and safety shoes are recommended when handling cylinders. Appropriate protective and chemical resistant gloves, clothing and splash protection, or fully encapsulating vapor protective clothing to prevent exposure. For materials of construction consult protective clothing manufacturer’s specifications.

#### Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/ MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

#### General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended.
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Compressed gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless.</td>
</tr>
<tr>
<td>Odor</td>
<td>Pungent.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>1-5 ppm</td>
</tr>
<tr>
<td>pH</td>
<td>If dissolved in water, will affect pH value</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No data available</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Molecular weight</th>
<th>Boiling point</th>
<th>Vapor Pressure</th>
<th>Vapor density (air =1)</th>
<th>Gas Density kg/ m³@ 20°C</th>
<th>Critical Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xenon</td>
<td>131.29</td>
<td>-108.1 °C</td>
<td>Above critical temperature</td>
<td>4.55</td>
<td>5.472</td>
<td>16.6 °C</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>28.01</td>
<td>-196 °C</td>
<td>Above critical temperature</td>
<td>0.97</td>
<td>1.153</td>
<td>-146.9 °C</td>
</tr>
<tr>
<td>Neon</td>
<td>20.17</td>
<td>-246.1 °C</td>
<td>Above critical temperature</td>
<td>0.694</td>
<td>0.922</td>
<td>-228.8 °C</td>
</tr>
<tr>
<td>Krypton</td>
<td>83.79</td>
<td>-153.4 °C</td>
<td>Above critical temperature</td>
<td>2.89</td>
<td>3.479</td>
<td>-228.8 °C</td>
</tr>
<tr>
<td>Helium</td>
<td>4.00</td>
<td>-268.9 °C</td>
<td>Above critical temperature</td>
<td>0.138</td>
<td>0.165</td>
<td>-267.9 °C</td>
</tr>
<tr>
<td>Argon</td>
<td>39.95</td>
<td>-185.9 °C</td>
<td>Above critical temperature</td>
<td>1.38</td>
<td>1.65</td>
<td>-122.3 °C</td>
</tr>
<tr>
<td>Hydrogen chloride</td>
<td>36.46</td>
<td>-85.0 °C</td>
<td>4227 kPa @ 21.1 °C</td>
<td>1.266</td>
<td>1.524</td>
<td>51.4 °C</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>1.00</td>
<td>-252.8 °C</td>
<td>Above critical temperature</td>
<td>0.07</td>
<td>0.083</td>
<td>-240 °C</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions

Chemical stability
Stable under recommended storage conditions.

Explosion data
- Sensitivity to Mechanical Impact: None.
- Sensitivity to Static Discharge: None.

Possibility of Hazardous Reactions
Highly soluble in water-will react to yield dense, acrid HCL fumes. Reacts vigorously with alkalis and many organic materials with liberation of

**Conditions to avoid**
Exposure to air or moisture over prolonged periods.

**Incompatible materials**

**Hazardous Decomposition Products**
Thermal decomposition can lead to release of irritating gases and vapors.

### 11. TOXICOLOGICAL INFORMATION

#### Information on likely routes of exposure

**Inhalation**
Studies indicate that hydrogen chloride is immediately irritating to humans at concentrations of 5 ppm or greater. Thirty minute lethal exposures in experimental animals ranged from 2640 ppm to 4700 ppm hydrogen chloride vapor. Corrosive to respiratory system.

**Skin contact**
Corrosive. Causes severe irritation and or burns.

**Eye contact**
Corrosive to the eyes and may cause severe damage including blindness.

**Ingestion**
Not an expected route of exposure.

#### Information on toxicological effects

**Symptoms**
Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate.

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

**Skin corrosion/irritation**
Category 1A.

**Serious eye damage/eye irritation**
Category 1.

**Irritation**
Causes severe irritation and or burns.

**Sensitization**
Not classified.

**Germ cell mutagenicity**
Not classified.

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td></td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7647-01-0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**IARC (International Agency for Research on Cancer)**
Not classifiable as a human carcinogen

**Reproductive toxicity**
Not classified.

**Teratogenicity**
Embryo and fetotoxicity has been observed in female rats exposed to maternally toxic levels of hydrogen chloride (302 ppm, 1hr.).

**STOT - single exposure**
Not classified.

**STOT - repeated exposure**
Not classified.

**Chronic toxicity**
Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects.

**Target Organ Effects**
Respiratory system, Eyes, Skin.

**Aspiration hazard**
Not applicable.

**Numerical measures of toxicity**

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LIND-M0108 HYDROGEN CHLORIDE (5-<7.8%), HYDROGEN (<=2.9%) in ARGON, HELIUM, KRYPTON, NEON, NITROGEN or XENON

Revision Date 22-May-2015
Component Level Information:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50 (CGA P-20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td>238 - 277 mg/kg (Rat)</td>
<td>&gt;5010 mg/kg (Rabbit)</td>
<td>3120 ppm (Rat) 1h</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>-</td>
<td>-</td>
<td>&gt;15000 ppm (Rat) 1h</td>
</tr>
</tbody>
</table>

Product Information

Oral LD50 No information available
Dermal LD50 No information available
Inhalation LC50 No information available

The following values are calculated based on chapter 3.1 of the GHS document.
ATEmix (inhalation-gas) >20,000 ppm

12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life. May cause pH changes in aqueous ecological systems.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td>-</td>
<td>282: 96 h Gambusia affinis mg/L LC50 static</td>
<td>-</td>
</tr>
</tbody>
</table>

Persistence and degradability
Not applicable.

Bioaccumulation
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to Linde for proper disposal.

14. TRANSPORT INFORMATION

Note: The technical names of components listed as part of shipping description will depend on specific mixture composition and/or balance gas.

DOT

<table>
<thead>
<tr>
<th>UN/ ID no.</th>
<th>Proper shipping name</th>
<th>Hazard Class</th>
<th>Packing Group</th>
<th>Description</th>
<th>Emergency Response Guide Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1956</td>
<td>Compressed gas, n.o.s.</td>
<td>2.2</td>
<td>None</td>
<td>UN1956, Compressed gas, n.o.s.(Hydrogen Chloride, XXXXX), 2.2</td>
<td>126</td>
</tr>
</tbody>
</table>

TDG

<table>
<thead>
<tr>
<th>UN/ ID no.</th>
<th>Proper shipping name</th>
<th>Hazard Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN1956</td>
<td>Compressed gas, n.o.s.</td>
<td>2.2</td>
</tr>
</tbody>
</table>
LIND-M0108 HYDROGEN CHLORIDE (5-<7.8%), HYDROGEN
(<=2.9%) in ARGON, HELIUM, KRYPTON, NEON, NITROGEN or
XENON

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15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td></td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td></td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td></td>
</tr>
</tbody>
</table>

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

US Federal Regulations

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen chloride</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/ 312 Hazard Categories

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

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 | 5000 lb 2270 kg

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**
This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

| Chemical Name | CAS No. | Hazardous air pollutants (HAPs) content | VOC Chemicals | Class 1 | Class 2 |
---|---|---|---|---|---|
Hydrogen chloride 7647-01-0 | X | | |

**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 7647-01-0 | 5000 lb | - | - | X |

**Risk and Process Safety Management Programs**
This material, as supplied, contains one or more regulated substances with specified thresholds under 40 CFR Part 68 or regulated as a highly hazardous chemical pursuant to the 29 CFR Part 1910.110 with specified thresholds:

| Chemical Name | U.S. - CAA (Clean Air Act) - Accidental Release Prevention - Toxic Substances | U.S. - CAA (Clean Air Act) - Accidental Release Prevention - Flammable Substances | U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals |
---|---|---|---|
Hydrogen chloride | 5000 lbs | | 5000 lb |

**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 |
---|---|---|---|
Neon 7440-01-9 | X | X | X |
Hydrogen chloride 7647-01-0 | X | X | X |
Hydrogen 1333-74-0 | X | X | X |

**International Regulations**

| Chemical Name | Carcinogenicity | Exposure Limits |
---|---|---|
Hydrogen chloride | | Mexico: Ceiling 5 ppm Mexico: Ceiling 7 mg/ m³ |

**Legend**
Canada NPRI - National Pollutant Release Inventory
16. OTHER INFORMATION

NFPA  Health hazards 3  Flammability 0  Instability 0  Physical and Chemical Properties W1**

Note: Ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19-2009, CGA Recommended Hazard Ratings for Compressed Gases, 3rd Edition.

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End of Safety Data Sheet