Hydrogen Chloride (Compressed)

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Issue date: 05/25/2017 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form : Substance

Substance name : Hydrogen Chloride (Compressed)

CAS-No. : 7647-01-0

Product code : CA-1001-07263

Formula : HCl

Synonyms : Hydrogen chloride, anhydrous

1.2. Recommended use and restrictions on use

Recommended uses and restrictions : Manufacture of substances
Semiconductor Purposes

1.3. Supplier

Air Liquide Canada Inc.
1250, René Lévesque West Blvd. Suite 1700
H3B 5E6 Montreal, QC - Canada
T 1-800-817-7697
www.airliquide.ca

1.4. Emergency telephone number

Emergency number : 514-878-1667

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Gases under pressure : Liquefied gas — H280 Contains gas under pressure; may explode if heated.
Acute toxicity (inhalation:gas) Category 3 — H331 Toxic if inhaled.
Skin corrosion/irritation, Category 1A — H314 Causes severe skin burns and eye damage.
Serious eye damage/eye irritation, Category 1 — H318 Causes serious eye damage.
Hazardous to the aquatic environment — Acute Hazard, Category 1 — H400 Very toxic to aquatic life.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS CA labelling

Hazard pictograms (GHS CA) :

Signal word (GHS CA) : Danger

Hazard statements (GHS CA) :
H280 - Contains gas under pressure; may explode if heated.
H331 - Toxic if inhaled.
H314 - Causes severe skin burns and eye damage.
H400 - Very toxic to aquatic life.

Precautionary statements (GHS CA) :
P363 - Wash contaminated clothing before reuse.
P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P391 - Collect spillage.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.
P405 - Store locked up.
P260 - Do not breathe dust/gas/vapours/spray.
P311 - Call a POISON CENTER or doctor.
P310 - Immediately call a POISON CENTER or doctor.

P321 - Specific treatment (see supplemental first aid instruction on this label).
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P264 - Wash hands, forearms and face thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

2.3. Other hazards

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS CA)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Chemical name/Synonyms	Product identifier	%	Classification (GHS CA)
Hydrogen Chloride (Compressed)	Hydrogen chloride, anhydrous	(CAS-No.) 7647-01-0	100	Press. Gas (Liq.), H280 Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400

Full text of hazard classes, H- and EUH-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Apply artificial respiration with bag and mask if breathing stopped. Get immediate medical advice/attention. Remove victim to uncontaminated area wearing self contained breathing apparatus. Keep victim warm and rested. Call a doctor. Perform cardiopulmonary resuscitation if breathing stopped.

First-aid measures after skin contact : Thaw frosted parts with lukewarm water. Do not rub affected area. Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Remove contaminated clothing. Drench affected area with water for at least 15 minutes. In case of frostbite spray with water for at least 15 minutes. Apply a sterile dressing. Obtain medical assistance.

First-aid measures after eye contact : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention. Rinse immediately with plenty of water for 15 minutes.

First-aid measures after ingestion : Ingestion is not considered a potential route of exposure.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Toxic if inhaled. Corrosive to the respiratory tract.

Symptoms/effects after skin contact : May cause frostbite. Causes severe skin burns and eye damage.

Symptoms/effects after eye contact : Contact with the product may cause cold burns or frostbite. Causes serious eye damage.

Symptoms/effects after ingestion : Ingestion is not considered a potential route of exposure.

Symptoms/effects upon intravenous administration : Not known.

Chronic symptoms : Adverse effects not expected from this product.

Most important symptoms and effects, both acute and delayed : May cause severe chemical burns to skin and cornea. Suitable first-aid treatment should be immediately available. Seek medical advice before using product. Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea. Refer to section 11.

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment : If you feel unwell, seek medical advice. If breathing is difficult, give oxygen. Obtain medical assistance. Treat with corticosteroid spray as soon as possible after inhalation.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.

5.2. Unsuitable extinguishing media

Unsuitable extinguishing media : Do not use water jet to extinguish.

5.3. Specific hazards arising from the hazardous product

Fire hazard : The product is not flammable.

Explosion hazard : Product is not explosive. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

Reactivity in case of fire : No reactivity hazard other than the effects described in sub-sections below.

Hazardous combustion products : None that are more hazardous than the product itself.

5.4. Special protective equipment and precautions for fire-fighters

Firefighting instructions : In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Exposure to fire may cause containers to rupture/explode.

Protection during firefighting : Standard protective clothing and equipment (e.g, Self Contained Breathing Apparatus) for fire fighters. Do not enter fire area without proper protective equipment, including respiratory protection.

Specific methods : Use fire control measures appropriate for the surrounding fire. Exposure to fire and heat radiation may cause gas receptacles to rupture. Cool endangered receptacles with water spray jet from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems. If possible, stop flow of product. Use water spray or fog to knock down fire fumes if possible. Move containers away from the fire area if this can be done without risk.

Special protective equipment for fire fighters : Wear gas tight chemically protective clothing in combination with self contained breathing apparatus. Standard EN 943-2: Protective clothing against liquid and gaseous chemicals, aerosols and solid particles. Gas-tight chemical protective suits for emergency teams. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Try to stop release. Evacuate area. Monitor concentration of released product. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Use chemically protective clothing. Ensure adequate air ventilation. Ensure adequate ventilation. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Act in accordance with local emergency plan. Stay upwind.

Personal Precautions, Protective Equipment and Emergency Procedures : EVACUATE ALL PERSONNEL FROM AFFECTED AREA. Use appropriate protective equipment. If leak is on user's equipment, be certain to purge piping before attempting repairs. If leak is on a container or container valve contact the closest Air Liquide Canada location.

6.2. Methods and materials for containment and cleaning up

For containment : Try to stop release if without risk.

Methods for cleaning up : Dispose of contents/container in accordance with local/regional/national/international regulations.

Methods and material for containment and cleaning up : Hose down area with water. Wash contaminated equipment or sites of leaks with copious quantities of water.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area.

Hygiene measures : Do not eat, drink or smoke when using this product.

Additional hazards when processed : Do not pierce or burn, even after use. Use only with equipment rated for cylinder pressure. Close valve after each use and when empty.

Safe use of the product : The product must be handled in accordance with good industrial hygiene and safety procedures. Only experienced and properly instructed persons should handle gases under pressure. Consider pressure relief device(s) in gas installations. Ensure the complete gas system was (or is regularily) checked for leaks before use. Do not smoke while handling product. Avoid exposure, obtain special instructions before use. Avoid contact with aluminium. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. Contact your gas supplier if in doubt. Installation of a cross purge assembly between the container and the regulator is recommended. Purge system with dry inert gas (e.g. helium or nitrogen) before gas is introduced and when system is placed out of service. Avoid

		suck back of water, acid and alkalis. Do not breathe gas. Avoid release of product into work area.
Safe handling of the gas receptacle	:	Refer to supplier's container handling instructions. Do not allow backfeed into the container. Protect cylinders from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport cylinders. Leave valve protection caps in place until the container has been secured against either a wall or bench or placed in a container stand and is ready for use. If user experiences any difficulty operating valve discontinue use and contact supplier. Never attempt to repair or modify container valves or safety relief devices. Damaged valves should be reported immediately to the supplier. Keep container valve outlets clean and free from contaminants particularly oil and water. Replace valve outlet caps or plugs and container caps where supplied as soon as container is disconnected from equipment. Close container valve after each use and when empty, even if still connected to equipment. Never attempt to transfer gases from one cylinder/container to another. Never use direct flame or electrical heating devices to raise the pressure of a container. Do not remove or deface labels provided by the supplier for the identification of the cylinder contents. Suck back of water into the container must be prevented. Open valve slowly to avoid pressure shock.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Comply with applicable regulations.
Storage conditions	:	Do not expose to temperatures exceeding 52 °C/ 125 °F. Keep container closed when not in use. Protect containers from physical damage; do not drag, roll, slide or drop. Store in well ventilated area. Store locked up.
Incompatible products	:	None known.
Incompatible materials	:	None known.
Conditions for safe storage, including any incompatibilities	:	Observe all regulations and local requirements regarding storage of containers. Containers should not be stored in conditions likely to encourage corrosion. Container valve guards or caps should be in place. Containers should be stored in the vertical position and properly secured to prevent them from falling over. Stored containers should be periodically checked for general condition and leakage. Keep container below 50°C in a well ventilated place. Store containers in location free from fire risk and away from sources of heat and ignition. Keep away from combustible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hydrogen Chloride (Compressed) (7647-01-0)	
Canada (Alberta) - Occupational Exposure Limits	
OEL Ceiling (mg/m³)	3 mg/m³
OEL Ceiling (ppm)	2 ppm
Canada (Quebec) - Occupational Exposure Limits	
PLAFOND (mg/m³)	7.5 mg/m³
PLAFOND (ppm)	5 ppm
Canada (British Columbia) - Occupational Exposure Limits	
OEL Ceiling (ppm)	2 ppm
Canada (Manitoba) - Occupational Exposure Limits	
OEL Ceiling (ppm)	2 ppm
Canada (New Brunswick) - Occupational Exposure Limits	
OEL Ceiling (mg/m³)	7.5 mg/m³
OEL Ceiling (ppm)	5 ppm
Canada (Newfoundland and Labrador) - Occupational Exposure Limits	
OEL Ceiling (ppm)	2 ppm
Canada (Nova Scotia) - Occupational Exposure Limits	
OEL Ceiling (ppm)	2 ppm
Canada (Nunavut) - Occupational Exposure Limits	
OEL Ceiling (ppm)	2 ppm
Canada (Northwest Territories) - Occupational Exposure Limits	

OEL Ceiling (ppm)	2 ppm
Canada (Ontario) - Occupational Exposure Limits	
OEL Ceiling (ppm)	2 ppm
Canada (Prince Edward Island) - Occupational Exposure Limits	
OEL Ceiling (ppm)	2 ppm
Canada (Saskatchewan) - Occupational Exposure Limits	
OEL Ceiling (ppm)	2 ppm
Canada (Yukon) - Occupational Exposure Limits	
OEL Ceiling (mg/m³)	7 mg/m³
OEL Ceiling (ppm)	5 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH Ceiling (ppm)	2 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (Ceiling) (mg/m³)	7 mg/m³
OSHA PEL C [ppm]	5 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure exposure is below occupational exposure limits (where available). Provide adequate general and local exhaust ventilation. Systems under pressure should be regularly checked for leakages. Consider the use of a work permit system e.g. for maintenance activities. Alarm detectors should be used when toxic gases may be released. Product to be handled in a closed system. Ensure exposure is below occupational exposure limits (where available).

Environmental exposure controls : Refer to local regulations for restriction of emissions to the atmosphere. See section 13 for specific methods for waste gas treatment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Safety glasses. Protective clothing. Safety shoes. A risk assessment should be conducted and documented in each work area to assess the risks related to the use of the product and to select the PPE that matches the relevant risk. The following recommendations should be considered: PPE compliant to the recommended EN/ISO standards should be selected.

Hand protection:

Wear working gloves when handling gas containers. Wear chemically resistant protective gloves when making or breaking process connections. Wear chemically resistant protective gloves. Standard EN 374 - Protective gloves against chemicals. Consult glove manufacturer´s product information on material suitability and material thickness. The breakthrough time of the selected gloves must be greater than the intended use period. Wear cold insulating gloves when transfilling or breaking transfer connections. Standard EN 511 - Cold insulating gloves. Permeation time: minimum >480min long term exposure : material / thickness Chloroprene rubber (Neoprene®) (CR) / 0.5 [mm]. Standard EN 388 - Protective gloves against mechanical risk.

Eye protection:

Wear safety glasses with side shields. Wear goggles and a face shield when transfilling or breaking transfer connections. Standard EN 166 - Personal eye-protection - specifications. Provide readily accessible eye wash stations and safety showers.

Skin and body protection:

Wear suitable protective clothing, e.g. lab coats, coveralls or flame resistant clothing.

Respiratory protection:

Wear a respirator when performing non-routine tasks not limited to line breaking or sampling. Wear a respirator during routine operations if determined to be necessary during a process-specific review. Consult respirator suppliers' product information or their representatives for the selection of the appropriate respirator. See Sections 5 & 6. Gas filters may be used if all surrounding conditions e.g. type and concentration of the contaminant(s) and duration of use are known. Use gas filters with full face mask, where exposure limits may be exceeded for a short-term period, e.g. connecting or disconnecting containers. Gas filters do not protect against oxygen deficiency. Standard EN 14387 - Gas filter(s), combined filter(s) and standard EN136, full face masks . Keep self contained breathing apparatus readily available for emergency use. Self contained breathing apparatus is recommended, where unknown exposure may be expected, e.g. during maintenance activities on installation systems. Standard EN 137 - Self-contained open-circuit compressed air breathing apparatus with full face mask. Recommended: Filter E (yellow).

Personal protective equipment symbol(s):

Thermal hazard protection:

None necessary during routine operations.

Other information:

Wear safety shoes while handling containers. Keep suitable chemically resistant protective clothing readily available for emergency use. Standard EN943-1 - Full protective suits against liquid, solid and gaseous chemicals. Standard EN ISO 20345 - Personal protective equipment - Safety footwear.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Gas
Appearance	:	Colorless gas.
Colour	:	Gives off white fumes in moist air. Colourless.
Odour	:	Pungent.
Odour threshold	:	0.5 ppm
pH	:	If dissolved in water pH-value will be affected.
Relative evaporation rate (butylacetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	Not applicable for gases and gas mixtures.
Molecular mass	:	17 g/mol
Melting point	:	-114 °C
Freezing point	:	-114 °C
Boiling point	:	-84.05 °C
Flash point	:	Not applicable for gases and gas mixtures.
Critical temperature	:	52.55 °C
Auto-ignition temperature	:	Non flammable.
Decomposition temperature	:	Not applicable.
Flammability (solid, gas)	:	See Section 2.1 and 2.2 Non flammable.
Vapour pressure	:	25111.3 mbar
Vapour pressure at 50 °C	:	No reliable data available.
Critical pressure	:	8310 kPa
Relative vapour density at 20 °C	:	1.268
Relative density	:	1.2
Density	:	1.161 – 1.19 g/cm³ (at 20 °C)
Relative gas density	:	1.3
Solubility	:	Water: 720000 mg/l
Partition coefficient n-octanol/water (Log Pow)	:	Not applicable for inorganic products. Not applicable for gas mixtures.
Viscosity, dynamic	:	No reliable data available.
Explosive properties	:	Not applicable (non-flammable gas).
Oxidising properties	:	None.
Explosive limits	:	Non flammable.

9.2. Other information

Gas group	:	Press. Gas (Liq.)
Additional information	:	Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level

SECTION 10: Stability and reactivity

Reactivity	:	None known.

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	None known. No reactivity hazard other than the effects described in sub-sections below.
Conditions to avoid	:	None under recommended storage and handling conditions (see section 7). Avoid moisture in installation systems.
Incompatible materials	:	May react violently with alkalis. Reacts with most metals in the presence of moisture, liberating hydrogen, an extremely flammable gas. With water causes rapid corrosion of some metals. Reacts with water to form corrosive acids. Moisture. For additional information on compatibility refer to ISO 11114.
Hazardous decomposition products	:	Under normal conditions of storage and use hazardous decomposition products should not be produced.
Hardening time:	:	No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Toxic if inhaled.

Hydrogen Chloride (Compressed) (7647-01-0)	
LD50 oral rat	238 – 277 mg/kg
LD50 dermal rabbit	> 5010 mg/kg
LC50 Inhalation - Rat	1.68 mg/l (Exposure time: 1 h)
LC50 Inhalation - Rat [ppm]	1560 ppm/4h
ATE CA (oral)	238 mg/kg bodyweight
ATE CA (Gases (except aerosol dispensers and lighters))	1560 ppmv/4h
ATE CA (vapours)	1.68 mg/l/4h
ATE CA (dust,mist)	1.68 mg/l/4h

Skin corrosion/irritation	:	Causes severe skin burns. pH: If dissolved in water pH-value will be affected.
Serious eye damage/irritation	:	Causes serious eye damage. pH: If dissolved in water pH-value will be affected.
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
IARC group	:	3 - Not classifiable3 - Not classifiable
Reproductive toxicity	:	Not classified
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified
Symptoms/effects after inhalation	:	Toxic if inhaled. Corrosive to the respiratory tract.
Symptoms/effects after skin contact	:	May cause frostbite. Causes severe skin burns and eye damage.
Symptoms/effects after eye contact	:	Contact with the product may cause cold burns or frostbite. Causes serious eye damage.
Symptoms/effects after ingestion	:	Ingestion is not considered a potential route of exposure.
Symptoms/effects upon intravenous administration	:	Not known.
Most important symptoms and effects, both acute and delayed	:	May cause severe chemical burns to skin and cornea. Suitable first-aid treatment should be immediately available. Seek medical advice before using product. Material is destructive to tissue of the mucuous membranes and upper respiratory tract. Cough, shortness of breath, headache, nausea. Refer to section 11.
Chronic symptoms	:	Adverse effects not expected from this product.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life.

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Hydrogen Chloride (Compressed) (7647-01-0)	
LC50-96 h - fish [mg/l]	20.5 mg/l
EC50 48h - Daphnia magna [mg/l]	0.45 mg/l
EC50 72h Algae [mg/l]	0.73 mg/l

12.2. Persistence and degradability

Hydrogen Chloride (Compressed) (7647-01-0)	
Persistence and degradability	Not applicable for inorganic products .

12.3. Bioaccumulative potential

Hydrogen Chloride (Compressed) (7647-01-0)	
Bioaccumulative potential	No data available. Product is an inorganic gas with a low potential to bioaccumulate in aquatic species.
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.
Partition coefficient n-octanol/water (Log Kow)	Not applicable for gas mixtures.

12.4. Mobility in soil

Hydrogen Chloride (Compressed) (7647-01-0)	
Ecology - soil	Because of its high volatility, the product is unlikely to cause ground or water pollution. Partition into soil is unlikely.
Partition coefficient n-octanol/water (Log Pow)	Not applicable for inorganic products.
Partition coefficient n-octanol/water (Log Kow)	Not applicable for gas mixtures.

12.5. Other adverse effects

Ozone : Not classified

Effect on ozone layer : No known effects from this product.

Other adverse effects : May cause pH changes in aqueous ecological systems.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Contact supplier if guidance is required. Do not discharge into any place where its accumulation could be dangerous. Ensure that the emission levels from local regulations or operating permits are not exceeded. Must not be discharged to atmosphere. Refer to the EIGA code of practice Doc.30 "Disposal of Gases", downloadable at http://www.eiga.org for more guidance on suitable disposal methods. Gas may be scrubbed in alkaline solution under controlled conditions to avoid violent reaction. Return unused product in original container to supplier.

Product/Packaging disposal recommendations : Refer to the CGA Pamphlet P-63 "Disposal of Gases" available at www.cganet.com for more guidance on suitable disposal methods.

Additional information : External treatment and disposal of waste should comply with applicable local and/or national regulations.

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

Transportation of Dangerous Goods

UN-No. (TDG) : UN1050

TDG Primary Hazard Classes : 2.2 - Class 2.2 - Non-Flammable, Non-Toxic Gas

TDG Subsidiary Classes : 8

Transport Document Description : UN1050 HYDROGEN CHLORIDE, ANHYDROUS (Hydrogen Chloride (Compressed)), 2.2 (8)

Proper Shipping Name : HYDROGEN CHLORIDE, ANHYDROUS
Hydrogen Chloride (Compressed)

Hazard labels (TDG)	:	2.3 - Toxic gases 8 - Corrosive substances 2.2 - Non-flammable, non-toxic gases

TDG Special Provisions	:	23 - (1) A person must not import, offer for transport, handle or transport these dangerous goods unless (a) they are contained in a means of containment that is marked in accordance with section 4.23, or, for UN1005, ANHYDROUS AMMONIA, in a large means of containment, in accordance with section 4.18.2; and (b) they are accompanied by a shipping document that complies with subparagraph 3.5(1)(c)(vii). (2) This special provision does not apply to a person who transports these dangerous goods in accordance with an exemption set out in section 1.15, 1.17, 1.17.1 or 1.24 of Part 1 (Coming Into Force, Repeal, Interpretation, General Provisions and Special Cases). SOR/2017-253 38 - A person must not handle, offer for transport or transport these dangerous goods in a large means of containment if they are in direct contact with the large means of containment. 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a) UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S; (b) UN1851, MEDICINE, LIQUID, TOXIC, N.O.S; (c) UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S; (d) UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S; or (e) UN3249, MEDICINE, SOLID, TOXIC, N.O.S. (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a) UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b) UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS.
ERAP Index	:	500
Explosive Limit and Limited Quantity Index	:	0
Passenger Carrying Ship Index	:	Forbidden
Excepted quantities (TDG)	:	E1
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	:	Forbidden,75 L
Marine pollutant	:	Yes (IMDG only)

14.2. Transport information/DOT - USA

Department of Transport

DOT NA No	:	UN1050
UN-No.(DOT)	:	1050
DOT Symbols	:	G - Identifies PSN requiring a technical name
Transport Document Description	:	UN1050 Hydrogen chloride, anhydrous Inhalation Hazard Zone C, 2.2 (8)
Proper Shipping Name (DOT)	:	Hydrogen chloride, anhydrous Inhalation Hazard Zone C
Contains Statement Field Selection (DOT)	:	DOT_TECHNICAL - Proper Shipping Name - Technical (DOT)
Class (DOT)	:	2.2 - Class 2.2 - Non-flammable compressed gas 49 CFR 173.115
Division (DOT)	:	2.2

Hazard labels (DOT)	:	2.3 - Poison gas 8 - Corrosive 2.2 - Non-flammable gas

Dangerous for the environment	:	No
DOT Special Provisions (49 CFR 172.102)	:	3 - This material is poisonous by inhalation (see 171.8 of this subchapter) in Hazard Zone C (see 173.116(a) of this subchapter), and must be described as an inhalation hazard under the provisions of this subchapter. N86 - UN pressure receptacles made of aluminum alloy are not authorized. N89 - When steel UN pressure receptacles are used, only those bearing the “H” mark are authorized. T50 - When portable tank instruction T50 is referenced in Column (7) of the 172.101 Table, the applicable liquefied compressed gases are authorized to be transported in portable tanks in accordance with the requirements of 173.313 of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	None
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	304
DOT Packaging Bulk (49 CFR 173.xxx)	:	None
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	Forbidden
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	Forbidden
DOT Vessel Stowage Location	:	D - The material must be stowed “on deck only” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded,A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	:	40 - Stow “clear of living quarters”
Emergency Response Guide (ERG) Number	:	125 (UN1050);157 (UN1789)
Special transport precautions	:	Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency. Before transporting product containers: - Ensure there is adequate ventilation. - Ensure that containers are firmly secured. - Ensure cylinder valve is closed and not leaking. - Ensure valve outlet cap nut or plug (where provided) is correctly fitted. - Ensure valve protection device (where provided) is correctly fitted.
Other information	:	No supplementary information available.

14.3. Air and sea transport

IMDG

UN-No. (IMDG)	:	1050
Proper Shipping Name (IMDG)	:	HYDROGEN CHLORIDE, ANHYDROUS
Transport Document Description (IMDG)	:	UN 1050 HYDROGEN CHLORIDE, ANHYDROUS, 2.2
Class (IMDG)	:	2 - Gases

IATA

UN-No. (IATA)	:	Forbidden
Proper Shipping Name (IATA)	:	Liquefied gas, n.o.s.
Transport Document Description (IATA)	:	UN Forbidden Liquefied gas, n.o.s., 2.2
Class (IATA)	:	2

SECTION 15: Regulatory information

15.1. National regulations

Hydrogen Chloride (Compressed) (7647-01-0)

Listed on the Canadian DSL (Domestic Substances List)

Hydrogen Chloride (Compressed) (7647-01-0)

Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

Hydrogen Chloride (Compressed) (7647-01-0)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on KECL/KECI (Korean Existing Chemicals Inventory)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Japanese Poisonous and Deleterious Substances Control Law
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

Hydrogen Chloride (Compressed) (7647-01-0)

Listed on the AICS (Australian Inventory of Chemical Substances)
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Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Japanese Poisonous and Deleterious Substances Control Law
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

SECTION 16: Other information

Issue date : 05/25/2017

Training advice : Users of breathing apparatus must be trained. Ensure operators understand the toxicity hazard.

Full text of H-statements:

H280	Contains gas under pressure; may explode if heated.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H400	Very toxic to aquatic life.

Abbreviations and acronyms:

	ATE - Acute Toxicity Estimate
	CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
	REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
	EINECS - European Inventory of Existing Commercial Chemical Substances
	CAS# - Chemical Abstract Service number
	PPE - Personal Protection Equipment
	LC50 - Lethal Concentration to 50 % of a test population
	RMM - Risk Management Measures
	PBT - Persistent, Bioaccumulative and Toxic
	vPvB - Very Persistent and Very Bioaccumulative
	STOT- SE : Specific Target Organ Toxicity - Single Exposure
	CSA - Chemical Safety Assessment
	EN - European Standard
	UN - United Nations
	ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road

	IATA - International Air Transport Association
	IMDG code - International Maritime Dangerous Goods
	RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
	WGK - Water Hazard Class
	STOT - RE : Specific Target Organ Toxicity - Repeated Exposure

SDS Canada (GHS)

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