SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830

hydrogen chloride, liquefied, under pressure

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name : hydrogen chloride, liquefied, under pressure

Synonyms : chlorohydric acid, liquefied, under pressure; hydrochloric acid; hydrochloric acid, anhydrous, liquefied, under pressure; hydrochloric acid, liquefied, under pressure; hydrogen chloride; muriatic acid, liquefied, under pressure; spirits of salt, liquefied, under pressure

Registration number REACH : 01-2119484862-27

Product type REACH : Substance/mono-constituent

CAS number : 7647-01-0

EC index number : 017-002-00-2

EC number : 231-595-7

RTECS number : MW4025000

Molecular mass : 36.46 g/mol

Formula : HCl

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

1.2.1 Relevant identified uses

Metal surface treatment

Food industry: auxiliary substance

Chemical intermediate

1.2.2 Uses advised against

See heading 15.1: Reach Annex XVII - Restriction

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

CHEMOGAS NV
Westvaartdijk 85
B-1850 Grimbergen Belgium
☎ +32 2 251 60 87
🖷 +32 2 252 17 51
info@chemogas.com

Distributor of the product

CHEMOGAS NV
Westvaartdijk 85
B-1850 Grimbergen Belgium
☎ +32 2 251 60 87
🖷 +32 2 252 17 51
info@chemogas.com

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):

+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Press. Gas	Liquefied gas	H280: Contains gas under pressure; may explode if heated.
Acute Tox.	category 3	H331: Toxic if inhaled.
Skin Corr.	category 1A	H314: Causes severe skin burns and eye damage.

2.2. Label elements

Signal word	Danger
H-statements	
H331	Toxic if inhaled.
H314	Causes severe skin burns and eye damage.
H280	Contains gas under pressure; may explode if heated.
P-statements	
P280	Wear protective gloves, protective clothing and eye protection/face protection.
P260	Do not breathe gas.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

2.3. Other hazards

May cause frostbites

SECTION 3: Composition/information on ingredients

3.1. Substances

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
hydrogen chloride 01-2119484862-27	7647-01-0 231-595-7	C>99 %	Press. Gas - Liquefied gas; H280 Acute Tox. 3; H331 Skin Corr. 1A; H314	(1)(2)	Mono-constituent

(2) Substance with a Community workplace exposure limit
(1) For H-statements in full: see heading 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Immediately consult a doctor/medical service.

After skin contact:

Wash immediately with lots of water (15 minutes)/shower. Do not apply (chemical) neutralizing agents. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

After eye contact:

Rinse immediately with plenty of water for 15 minutes. Cover eyes aseptically. Do not apply neutralizing agents. Take victim to an ophthalmologist.

After ingestion:

Not applicable.

4.2. Most important symptoms and effects, both acute and delayed

4.2.1 Acute symptoms

After inhalation:

Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. EXPOSURE TO HIGH CONCENTRATIONS: Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Possible oedema of the upper respiratory tract. Possible inflammation of the respiratory tract. Possible laryngeal spasm/oedema. Risk of lung oedema. Respiratory difficulties.

After skin contact:

Caustic burns/corrosion of the skin.

After eye contact:

Corrosion of the eye tissue. Permanent eye damage.

After ingestion:

Not applicable.

4.2.2 Delayed symptoms

No effects known.

4.3. Indication of any immediate medical attention and special treatment needed

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Adapt extinguishing media to the environment.

5.1.2 Unsuitable extinguishing media:

Solid water jet ineffective as extinguishing medium.

5.2. Special hazards arising from the substance or mixture

Decomposes on exposure to temperature rise: release of toxic/corrosive/combustible gases/vapours (chlorine, hydrogen). Reacts exothermically with water (moisture): release of corrosive products. Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen).

5.3. Advice for firefighters

5.3.1 Instructions:

Cool tanks/drums with water spray/remove them into safety. Physical explosion risk: cool from behind cover. Do not move the load if exposed to heat. After cooling: persistant risk of physical explosion. Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

5.3.2 Special protective equipment for fire-fighters:

Gas-tight suit. Corrosion-proof suit. Compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep upwind. Seal off low-lying areas. Close doors and windows of adjacent premises. No naked flames. Corrosion-proof appliances. Avoid ingress of water in the containers.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gas-tight suit. Corrosion-proof suit.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Tip the container on one side to stop the leakage. Try to reduce evaporation. Take account of toxic/corrosive precipitation water. Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

Take up liquid spill into dry absorbent material e.g.: dry soda ash dry slaked lime or dry sand. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Take precautions against electrostatic charges. Gas/vapour heavier than air at 20°C. Observe very strict hygiene - avoid contact. Remove contaminated clothing immediately. Use corrosionproof equipment.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Storage temperature: 50 °C. Store in a dry area. Ventilation at floor level. Fireproof storeroom. Keep locked up. Provide for a tub to collect spills. Unauthorized persons are not admitted. Aboveground. Store only in a limited quantity. Keep out of direct sunlight. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, oxidizing agents, reducing agents, (strong) acids, (strong) bases, combustible materials, highly flammable materials, metals, organic materials, alcohols, water/moisture.

7.2.3 Suitable packaging material:

Stainless steel, monel steel, carbon steel, polyethylene.

7.2.4 Non suitable packaging material:

Iron, zinc, bronze.

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

The Netherlands

Zoutzuur	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	5.3 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	8 mg/m³
	Short time value (Public occupational exposure limit value)	9.9 ppm
	Short time value (Public occupational exposure limit value)	15 mg/m³

EU

Hydrogen chloride	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	5 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	8 mg/m³
	Short time value (Indicative occupational exposure limit value)	10 ppm
	Short time value (Indicative occupational exposure limit value)	15 mg/m³

Belgium

Hydrogène (chlorure d')	Time-weighted average exposure limit 8 h	5 ppm
	Time-weighted average exposure limit 8 h	8 mg/m³
	Short time value	10 ppm
	Short time value	15 mg/m³

USA (TLV-ACGIH)

Hydrogen chloride	Momentary value (TLV - Adopted Value)	2 ppm

Germany

Hydrogenchlorid	Time-weighted average exposure limit 8 h (TRGS 900)	2 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	3 mg/m³

France

Chlorure d'hydrogène	Short time value (VRC: Valeur réglementaire contraignante)	5 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	7.6 mg/m³

UK

Hydrogen chloride (gas and aerosol mists)	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	1 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	2 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	5 ppm
	Short time value (Workplace exposure limit (EH40/2005))	8 mg/m³

b) National biological limit values

If limit values are applicable and available these will be listed below.

8.1.2 Sampling methods

Product name	Test	Number
Hydrogen Chloride (Acids, inorganic)	NIOSH	7903
Hydrogen Chloride (VOLATILE ACIDS)	NIOSH	7907
Hydrogen Chloride	OSHA	ID 174SG

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL/DMEL - Workers

hydrogen chloride, liquefied, under pressure

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	8 mg/m³	
	Acute systemic effects inhalation	15 mg/m³	

PNEC

hydrogen chloride, liquefied, under pressure

Compartments	Value	Remark
Fresh water	36 µg/l	
Marine water	36 µg/l	
Aqua (intermittent releases)	45 µg/l	
STP	36 µg/l	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Take precautions against electrostatic charges. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Exhaust gas must be neutralised.

8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. Do not eat, drink or smoke during work.

a) Respiratory protection:

Wear gas mask with filter type B if conc. in air > exposure limit. Gas mask with filter type K at conc. in air > exposure limit. Self-contained breathing apparatus if conc. in air > 1 vol %.

b) Hand protection:

Insulated gloves.

- materials (excellent resistance)

Nitrile rubber.

- materials (good resistance)

Neoprene, PVC, viton, nitrile rubber.

- materials (less resistance)

Polyethylene, PVA.

c) Eye protection:

Protective goggles.

d) Skin protection:

Head/neck protection. Corrosion-proof clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Liquefied gas
Odour	Irritating/pungent odour
	Asphyxiating odour
Odour threshold	1.0 - 35 ppm
	1.52 - 53.2 mg/m³
Colour	Colourless
Particle size	Not applicable (gas)
Explosion limits	Not applicable
Flammability	Non combustible
Log Kow	0.25 ; Calculated
Dynamic viscosity	2.04 mPa.s ; 20 °C
Kinematic viscosity	0.0000017 mm²/s ; 20 °C
	0.0000013 mm²/s ; 40 °C
Melting point	-114 °C
Boiling point	-85 °C
Flash point	Not applicable
Evaporation rate	No data available

Relative vapour density	1.3
Vapour pressure	43000 hPa ; 20 °C
	80600 hPa ; 50 °C
	46200 hPa ; 25 °C
Solubility	water ; 50.7 g/100 ml ; 20 °C
	ethanol ; soluble
	ether ; soluble
	acetone ; soluble
	chloroform
	acetic acid ; soluble
	tetrahydrofuran ; soluble
Relative density	1.2 ; -85 °C
Decomposition temperature	> 100 °C
Auto-ignition temperature	Not applicable
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	1 ; 0.4 %

9.2. Other information

Critical temperature	51.4 °C
Critical pressure	82600 hPa
Absolute density	1190 kg/m³ ; -85 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

Substance has acid reaction.

10.2. Chemical stability

Unstable on exposure to moisture.

10.3. Possibility of hazardous reactions

Reacts exothermically with water (moisture): release of corrosive products. Violent exothermic reaction with many compounds e.g.: with (some) acids/bases. Violent to explosive reaction with organic material: release of heat. Violent to explosive reaction with (some) metal powders.

10.4. Conditions to avoid

Keep away from naked flames/heat. Take precautions against electrostatic charges.

10.5. Incompatible materials

Oxidizing agents, reducing agents, (strong) acids, (strong) bases, combustible materials, highly flammable materials, metals, organic materials, alcohols, water/moisture.

10.6. Hazardous decomposition products

On exposure to air: release of corrosive mist (hydrogen chloride). Reacts violently with (strong) oxidizers: release of toxic and corrosive gases/vapours (chlorine). Decomposes on exposure to temperature rise: release of toxic/corrosive/combustible gases/vapours (chlorine, hydrogen). Reacts on exposure to water (moisture) with (some) metals: release of highly flammable gases/vapours (hydrogen).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

11.1.1 Test results

Acute toxicity

hydrogen chloride, liquefied, under pressure

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral						Data waiving	
Dermal						Data waiving	
Inhalation (aerosol)	LC50		8.3 mg/l air	30 minutes	Rat (male)	Experimental value	

As the substance is a gas, inhalation is the most likely route of exposure

Conclusion

Toxic if inhaled.

Corrosion/irritation

hydrogen chloride, liquefied, under pressure

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	10%: risk of serious eye damage	OECD 405		4; 24; 48; 72; 96 hours	Rabbit	Experimental value	Aqueous solution
Skin	37%: corrosive	OECD 404	1-4 h	1; 24; 48; 72 hrs; 8 days	Rabbit	Experimental value	Aqueous solution

The liquid form can cause frostbites, typical for all liquified gases

Conclusion

Causes severe skin burns and eye damage.

Respiratory or skin sensitisation

hydrogen chloride, liquefied, under pressure

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 406	12 day(s)		Guinea pig (female)	Experimental value	Liquid
Skin	Not sensitizing	Human observation			Human	Experimental value	Aqueous solution

The study on skin sensitisation does not need to be conducted as the substance is a gas

Conclusion

Not classified as sensitizing for skin

Specific target organ toxicity

hydrogen chloride, liquefied, under pressure

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (gases)	NOAEL	Equivalent to OECD 413	20 ppm		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (gases)	LOAEL	Equivalent to OECD 413	50 ppm	General	Clinical signs; mortality; body weight; food consumption	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

As the substance is a gas, inhalation is the most likely route of exposure

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

hydrogen chloride, liquefied, under pressure

Result	Method	Test substrate	Effect	Value determination
Positive with metabolic activation	Other	Mouse (lymphoma L5178Y cells)		Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Yeast (S. cerevisiae)	No effect	Experimental value

Mutagenicity (in vivo)

hydrogen chloride, liquefied, under pressure

Result	Method	Exposure time	Test substrate	Organ	Value determination
					Data waiving

Carcinogenicity

hydrogen chloride, liquefied, under pressure

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (gases)	NOAEL	OECD 451	< 10 ppm	128 weeks (6h/day, 5 days/week)	Rat (male)	No carcinogenic effect		Read-across

Reproductive toxicity

hydrogen chloride, liquefied, under pressure

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination

Developmental toxicity								Data waiving
Maternal toxicity								Data waiving
Effects on fertility								Data waiving

Conclusion CMR

Not classified for carcinogenicity

Not classified for mutagenic or genotoxic toxicity

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

hydrogen chloride, liquefied, under pressure

No (test)data available

Chronic effects from short and long-term exposure

hydrogen chloride, liquefied, under pressure

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Affection of the nasal septum. Nosebleeding. Inflammation/affection of the gums. Affection/discolouration of the teeth. Risk of pneumonia.

SECTION 12: Ecological information

12.1. Toxicity

hydrogen chloride, liquefied, under pressure

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		282 mg/l	96 h	Gambusia affinis		Fresh water	Literature study
	LC50	Other	pH 3.25-3.5	96 h	Lepomis macrochirus	Semi-static system	Fresh water	Experimental value
Acute toxicity invertebrates	EC50		< 56 mg/l	72 h	Daphnia magna			Literature study
	EC50	OECD 202	pH 4.92	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	OECD 201	pH 4.7	72 h	Chlorella vulgaris	Static system	Fresh water	Experimental value; Growth rate
	NOEC	OECD 201	pH 5	72 h	Chlorella vulgaris	Static system	Fresh water	Experimental value; Growth rate
Toxicity aquatic micro-organisms	EC50	OECD 209	pH 5-5.5	3 h	Activated sludge	Static system	Fresh water	Experimental value; GLP

Conclusion

Slightly harmful to fishes

Insufficient data

Insufficient data

pH shift

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

hydrogen chloride, liquefied, under pressure

Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
			Not applicable (gas)

Conclusion

Biodegradability: not applicable

12.3. Bioaccumulative potential

hydrogen chloride, liquefied, under pressure

Log Kow

Method	Remark	Value	Temperature	Value determination
		0.25		Calculated

Conclusion

Low potential for bioaccumulation (Log Kow < 4)

12.4. Mobility in soil

Not applicable (gas)

12.5. Results of PBT and vPvB assessment

The criteria of PBT and vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006 do not apply to inorganic substances.

12.6. Other adverse effects

hydrogen chloride, liquefied, under pressure

Global warming potential (GWP)

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
16 05 04* (gases in pressure containers and discarded chemicals: gases in pressure containers (including halons) containing dangerous substances).
Depending on branch of industry and production process, also other waste codes may be applicable. Hazardous waste according to Regulation (EU) No 1357/2014.

13.1.2 Disposal methods

Refer to manufacturer/supplier for information on recovery/ recycling. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

UN number	1050

14.2. UN proper shipping name

Proper shipping name	Hydrogen chloride, anhydrous

14.3. Transport hazard class(es)

Hazard identification number	268
Class	2
Classification code	2TC

14.4. Packing group

Packing group	
Labels	2.3+8

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	none.

Rail (RID)

14.1. UN number

UN number	1050

14.2. UN proper shipping name

Proper shipping name	Hydrogen chloride, anhydrous

14.3. Transport hazard class(es)

Hazard identification number	268
Class	2
Classification code	2TC

14.4. Packing group

Packing group	
Labels	2.3+8 (+13)

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	none.

Inland waterways (ADN)

14.1. UN number

UN number	1050

14.2. UN proper shipping name

Proper shipping name	Hydrogen chloride, anhydrous

14.3. Transport hazard class(es)

Class	2
Classification code	2TC

14.4. Packing group

Packing group	
Labels	2.3+8

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	none.

Sea (IMDG/IMSBC)

14.1. UN number

UN number	1050

14.2. UN proper shipping name

Proper shipping name	Hydrogen chloride, anhydrous

14.3. Transport hazard class(es)

Class	2.3

14.4. Packing group

Packing group	
Labels	2.3 + 8

14.5. Environmental hazards

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	none.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Annex II of MARPOL 73/78	Not applicable

Air (ICAO-TI/IATA-DGR)

14.1. UN number

Transport	Forbidden
UN number	1050

14.2. UN proper shipping name

Proper shipping name	Hydrogen chloride, anhydrous

14.3. Transport hazard class(es)

Class	2.3

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	A2
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
	Not applicable (inorganic)

European drinking water standards (Directive 98/83/EC)

hydrogen chloride, liquefied, under pressure

Parameter	Parametric value	Note	Reference
Chloride	250 mg/l		Listed in Annex I, Part C, of Directive 98/83/EC on the quality of water intended for human consumption.

National legislation The Netherlands

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 06
Waterbezwaarlijkheid	11

National legislation Germany

Schwangerschaft Gruppe	C
WGK	1; Classification water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 2)
TA-Luft	5.2.4; III

National legislation France

No data available

National legislation Belgium

No data available

Other relevant data

TLV - Carcinogen	Hydrogen chloride; A4
IARC - classification	3; Hydrochloric acid

15.2. Chemical safety assessment

A chemical safety assessment has been performed.

SECTION 16: Other information

Full text of any H-statements referred to under headings 2 and 3:

H280 Contains gas under pressure; may explode if heated.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Old versions must be destroyed. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.