SAFETY DATA SHEET

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

hydrobromic acid, liquefied, under pressure

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

1.1. Product identifier

Product name : hydrobromic acid, liquefied, under pressure
Synonyms : bromide of hydrogen, liquefied, under pressure; hydrobromic acid; hydrobromic acid, anhydrous; hydrogen bromide; hydrogen bromide, anhydrous; hydrogenbromide, liquefied, under pressure
Registration number REACH : 01-2119479072-39
Product type REACH : Substance/mono-constituent
CAS number : 10035-10-6
EC index number : 035-002-00-0
EC number : 233-113-0
RTECS number : MW3850000
Molecular mass : 80.92 g/mol
Formula : HBr

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

1.2.1 Relevant identified uses

Industrial and professional use. Before use: carry out a risk assessment

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

BALCHEM NV
Westvaartdijk 85
B-1850 Grimbergen Belgium
☎ +32 2 251 60 87
+32 2 252 17 51
info.grimbergen@balchem.com

Distributor of the product

BALCHEM NV
Westvaartdijk 85
B-1850 Grimbergen Belgium
☎ +32 2 251 60 87
+32 2 252 17 51
info.grimbergen@balchem.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.
Skin Corr.	category 1A	H314: Causes severe skin burns and eye damage.
STOT SE	category 3	H335: May cause respiratory irritation.

2.2. Label elements

Signal word Danger

H-statements

H280 Contains gas under pressure; may explode if heated.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

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
May cause frostbites
Harmful to fishes
Harmful to invertebrates (Daphnia)
Harmful to algae
Harmful to aquatic organisms

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 bromide 01-2119479072-39	10035-10-6 233-113-0	C>99 %	Press. Gas - Liquefied gas; H280 Skin Corr. 1A; H314 STOT SE 3; H335	(1)(2)	Mono-constituent

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

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. Respiratory problems: 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. Do not apply neutralizing agents. Cover eyes aseptically. 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. Frostbites.

After eye contact:

Corrosion of the eye tissue. Permanent eye damage.

After ingestion:

No effects known.

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:

No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

On exposure to temperature rise: release of toxic and corrosive gases/vapours. 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:

Insulating gloves. 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. 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

Insulating gloves. 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

Prevent evaporation by covering with: sand, earth, vermiculite. Cover the solid spill with powdered limestone/sodium bicarbonate. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. 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. 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 dark area. Ventilation at floor level. Provide for a tub to collect spills. Keep locked up. Unauthorized persons are not admitted. Meet the legal requirements.

7.2.2 Keep away from:

Heat sources, oxidizing agents, (strong) bases, organic materials, metals, water.

7.2.3 Suitable packaging material:

Stainless steel, monel steel.

7.2.4 Non suitable packaging material:

Steel, aluminium, iron, copper, zinc, nickel.

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

Broomwaterstof	Short time value (Public occupational exposure limit value)	2 ppm
	Short time value (Public occupational exposure limit value)	6.7 mg/m³

EU

Hydrogen bromide	Short time value (Indicative occupational exposure limit value)	2 ppm
	Short time value (Indicative occupational exposure limit value)	6.7 mg/m³

Belgium

Hydrogène (bromure d')	Short time value	2 ppm
	Short time value	6.7 mg/m³

USA (TLV-ACGIH)

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

Germany

Hydrogenbromid	Time-weighted average exposure limit 8 h (TRGS 900)	6.7 mg/m³

France

Acide bromhydrique	Short time value (VRI: Valeur réglementaire indicative)	2 ppm
	Short time value (VRI: Valeur réglementaire indicative)	6.7 mg/m³

UK

Hydrogen bromide	Short time value (Workplace exposure limit (EH40/2005))	3 ppm
	Short time value (Workplace exposure limit (EH40/2005))	10 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 Bromide (Acids, inorganic)	NIOSH	7903
Hydrogen Bromide (VOLATILE ACIDS)	NIOSH	7907
Hydrogen Bromide	OSHA	ID 165SG

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

hydrobromic acid, liquefied, under pressure

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	6.7 mg/m³	
	Acute systemic effects inhalation	6.7 mg/m³	
	Long-term local effects inhalation	6.7 mg/m³	
	Acute local effects inhalation	6.7 mg/m³	

PNEC

hydrobromic acid, liquefied, under pressure

Compartments	Value	Remark
Fresh water	0.019 mg/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. 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:

Gas mask with filter type B. Gas mask with filter type E. High vapour/gas concentration: self-contained respirator.

b) Hand protection:

Insulated gloves.

- materials (good resistance)

Neoprene, PVC, tetrafluoroethylene, polyethylene, viton.

- materials (less resistance)

Butyl rubber, chloroprene rubber, natural rubber, styrene-butadiene rubber, nitrile rubber/PVC.

- materials (poor resistance)
  Polyurethane.

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
Odour threshold	2 ppm
	6.7 mg/m³
Colour	Colourless
Particle size	Not applicable (gas)
Explosion limits	No data available
Flammability	Non-flammable
Log Kow	No data available
Dynamic viscosity	0.0009 Pa.s ; -87 °C
Kinematic viscosity	0.32143 mm²/s ; -87 °C
Melting point	-88 °C
Boiling point	-67 °C
Flash point	Not applicable (gas)
Evaporation rate	No data available
Relative vapour density	2.8
Vapour pressure	21300 hPa ; 20 °C
	40700 hPa ; 50 °C
Solubility	water ; Complete
Relative density	2.8 ; -67 °C
Decomposition temperature	No data available
Auto-ignition temperature	No data available
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	1 ; 62 %

9.2. Other information

Critical temperature	89.8 °C
Critical pressure	85500 hPa
Surface tension	0.027 N/m ; -67 °C
Absolute density	2770 kg/m³ ; -67 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

Substance has acid reaction.

10.2. Chemical stability

Unstable on exposure to moisture. Discolours on exposure to light. Discolours on exposure to air.

10.3. Possibility of hazardous reactions

Reacts exothermically with water (moisture): release of corrosive products. Violent exothermic reaction with many compounds. Reacts exothermically with (some) bases. Reacts with (strong) oxidizers: release of corrosive gases/vapours.

10.4. Conditions to avoid

Keep away from naked flames/heat.

10.5. Incompatible materials

Oxidizing agents, (strong) bases, organic materials, metals, water.

10.6. Hazardous decomposition products

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

hydrobromic acid, liquefied, under pressure

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		238 mg/kg bw - 277 mg/kg bw		Rat (female)	Read-across	Aqueous solution
Dermal						Data waiving	
Inhalation	LC50		2860 ppm	1 h	Rat	Experimental value	

Conclusion

Not classified for acute toxicity

Corrosion/irritation

hydrobromic acid, liquefied, under pressure

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye						Data waiving	
Skin	Corrosive				Rat	Experimental value	
Inhalation	Irritating; STOT SE cat.3					Annex VI	

Conclusion

Causes severe skin burns and eye damage.

May cause respiratory irritation.

Respiratory or skin sensitisation

hydrobromic acid, liquefied, under pressure

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Dermal						Data waiving	

Conclusion

Not classified as sensitizing for skin

Not classified as sensitizing for inhalation

Specific target organ toxicity

hydrobromic acid, liquefied, under pressure

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral								Data waiving
Dermal								Data waiving
Inhalation (vapours)	NOAEC	EPA TSCA consent order	0.1 mg/l	Nose	No effect	5 day(s)	Rat (male/female)	Read-across
Inhalation (vapours)	LOAEC	EPA TSCA consent order	0.3 mg/l	Nose	Inflammation of the respiratory tract	5 day(s)	Rat (male/female)	Read-across

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

hydrobromic acid, liquefied, under pressure

Result	Method	Test substrate	Effect	Value determination
Negative	OECD 471	Bacteria (S.typhimurium)		Read-across
Negative	Equivalent to OECD 473	Chinese hamster ovary (CHO)	No effect	Read-across

Mutagenicity (in vivo)

hydrobromic acid, liquefied, under pressure

Result	Method	Exposure time	Test substrate	Organ	Value determination
					Data waiving

Carcinogenicity

hydrobromic acid, liquefied, under pressure

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Organ	Effect
Inhalation (gases)	NOEC	Not further determined	> 110 ppm	128 weeks (6h/day, 5 days/week)	Rat (male)	Experimental value		No carcinogenic effect
Dermal						Data waiving		
Oral						Data waiving		

Reproductive toxicity

hydrobromic acid, liquefied, under pressure

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental 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

hydrobromic acid, liquefied, under pressure

No (test)data available

Chronic effects from short and long-term exposure

hydrobromic acid, 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

hydrobromic acid, liquefied, under pressure

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	TLm		10 ppm - 100 ppm	96 h	Pisces			
Acute toxicity invertebrates	EC50	EU Method C.2	19 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value; GLP
Toxicity algae and other aquatic plants	EC50	EU Method C.3	56 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Biomass
	EC10	EU Method C.3	24 mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Biomass

Conclusion

Harmful to fishes

Harmful to invertebrates (Daphnia)

Harmful to algae

Harmful to aquatic organisms

pH shift

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

12.2. Persistence and degradability

hydrobromic acid, liquefied, under pressure

Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
Not applicable			

Conclusion

Biodegradability: not applicable

12.3. Bioaccumulative potential

hydrobromic acid, liquefied, under pressure

Log Kow

Method	Remark	Value	Temperature	Value determination
	No data available			

Conclusion

Not bioaccumulative

12.4. Mobility in soil

Low potential for adsorption in soil

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

hydrobromic acid, liquefied, under pressure

Global warming potential (GWP)

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

Not included in the list of substances which may contribute to the greenhouse effect (IPCC)

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).
Hazardous waste according to Regulation (EU) No 1357/2014.

13.1.2 Disposal methods

Refer to manufacturer/supplier for information on recovery/ recycling. Remove for physico-chemical/biological treatment. Neutralize. 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. Use appropriate containment to avoid environmental contamination.

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	1048

14.2. UN proper shipping name

Proper shipping name	Hydrogen bromide, 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	1048

14.2. UN proper shipping name

Proper shipping name	Hydrogen bromide, 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	1048

14.2. UN proper shipping name

Proper shipping name	Hydrogen bromide, 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	1048

14.2. UN proper shipping name

Proper shipping name	Hydrogen bromide, 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	1048

14.2. UN proper shipping name

Proper shipping name	Hydrogen bromide, 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
0 %	

National legislation The Netherlands

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 06
Waterbezwaarlijkheid	9

National legislation Germany

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

National legislation France

No data available

National legislation Belgium

No data available

Other relevant data

No data available

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.
H335 May cause respiratory irritation.

(*) = 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.