

According to REACH Regulations (EC) 1907/2006 and (EU) 2020/878

1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product code : GE3443
 Product name : Hydrochloric acid, 4% (w/v) in water
 CAS number : 7647-01-0
 EINECS : 231-595-7
 Physical form : liquid, mixture
 REACH : A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

PC21: Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

Company name	: Glentham Life Sciences Ltd	Telephone	: +44 (0) 1225 667 798
	Unit 5 Leafield Way	Fax	: +44 (0) 2033 978 909
	Corsham SN13 9SW	Email	: info@glentham.com
	United Kingdom	Web	: www.glentham.com

1.4 Emergency telephone number

Emergency telephone : NHS Direct 111 (UK, 24 hours), 112 (EU, 24 Hours), +44 (0) 1225 667 798 (09.00 – 17.00 GMT) number

2. Hazards identification

2.1 Classification of the substance or mixture

Classification under CLP according to (EC) 1272/2008

H290 Met. Corr. 1

2.2 Label elements

Label elements under CLP according to (EC) 1272/2008

Pictograms



GHS05

Signal words Warning

Hazard statements

H290 May be corrosive to metals

Precautionary statements

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
 P406 Store in corrosive resistant polyethylene container with a resistant inliner.

2.3 Other hazards

PBT

This substance is not identified as a PBT substance.

3.0 Composition/information on ingredients

3.2 Mixtures

Name	Identifier	%	Classification
Hydrochloric acid	CAS: 7647-01-0 EC: 231-595-7 REACH: Not applicable	4	H290, Met. Corr. 1 H314, Skin Corr. 1B H335, STOT SE 3

4. First aid measures

4.1 Description of first aid measures

Skin contact	Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Remove all contaminated clothes and footwear immediately unless stuck to skin. Transfer to hospital if there are burns or symptoms of poisoning.
Eye contact	Transfer to hospital for specialist examination. Bathe the eye with running water for 15 minutes.
Ingestion	Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious and breathing is OK, place in the recovery position. If unconscious, check for breathing and apply artificial respiration if necessary. Transfer to hospital as soon as possible. Wash out mouth with water.
Inhalation	If breathing becomes bubbly, have the casualty sit and provide oxygen if available. If conscious, ensure the casualty sits or lies down. If unconscious and breathing is OK, place in the recovery position. If unconscious, check for breathing and apply artificial respiration if necessary. Remove casualty from exposure ensuring one's own safety whilst doing so. Transfer to hospital as soon as possible.

4.2 Most important symptoms and effects, both acute and delayed

Skin contact	Blistering may occur. Progressive ulceration will occur if treatment is not immediate.
Eye contact	Corneal burns may occur. May cause permanent damage.
Ingestion	Blood may be vomited. Corrosive burns may appear around the lips. There may be bleeding from the mouth or nose.
Inhalation	Exposure may cause coughing or wheezing. There may be shortness of breath with a burning sensation in the throat.
Delayed / immediate effects	Immediate effects can be expected after short-term exposure. There may be bleeding from the mouth or nose.

4.3 Indication of any immediate medical attention and special treatment needed

Immediate / special treatment

Do not induce vomiting. Eye bathing equipment should be available on the premises.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2 Special hazards arising from the substance or mixture

Exposure hazards

Corrosive. In combustion emits toxic fumes.

5.3 Advice for fire-fighters

Wear protective clothing to prevent contact with skin and eyes. Wear self-contained breathing apparatus.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions

Do not attempt to take action without suitable protective clothing - see section 8 of SDS. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Notify the police and fire brigade immediately.

6.2 Environmental precautions

Do not discharge into drains or rivers.

6.3 Methods and material for containment and cleaning up

Clean-up procedures

Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4 Reference to other sections

Refer to section 8 of SDS.

7. Handling and storage

7.1 Precautions for safe handling

Handling requirements

Avoid direct contact with the substance. Avoid the formation or spread of dust in the air. Do not handle in a confined space. Ensure there is sufficient ventilation of the area.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Avoid contact with water or humidity. Keep container tightly closed. Store in cool, well ventilated area.

7.3 Specific end use(s)

No data available.

8. Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits

Substance (CAS)	Control Parameter	Value	Notes	Source
Hydrogen chloride (7647-01-0)	Long-term Exposure Limit (ppm)	8		2000/39/EC
	Long-term Exposure Limit (mg m ⁻³)	5		
	Short-term Exposure Limit (ppm)	15		
	Short-term Exposure Limit (mg m ⁻³)	10		
	Long-term Exposure Limit (ppm)	1		UK HSE EH40/2005
	Long-term Exposure Limit (mg m ⁻³)	2		
	Short-term Exposure Limit (ppm)	5		
	Short-term Exposure Limit (mg m ⁻³)	8		

Hydrogen chloride (gas and aerosol mists) (7647-01-0)	Long-term Exposure Limit (ppm)	8	2000/39/EC
	Long-term Exposure Limit (mg m ⁻³)	5	
	Short-term Exposure Limit (ppm)	15	
	Short-term Exposure Limit (mg m ⁻³)	10	
	Long-term Exposure Limit (ppm)	1	UK HSE EH40/2005
	Long-term Exposure Limit (mg m ⁻³)	2	
	Short-term Exposure Limit (ppm)	5	
	Short-term Exposure Limit (mg m ⁻³)	8	

8.2 Exposure controls

Engineering measures	Ensure there is sufficient ventilation of the area.
Respiratory protection	Respiratory protective device with particle filter. Self-contained breathing apparatus must be available in case of emergency.
Hand protection	Protective gloves.
Eye protection	Ensure eye bath is to hand. Tightly fitting safety goggles.
Skin protection	Protective clothing.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Colour	Colourless
Odour	No data available.
Melting point/Freezing point	-114 °C
Boiling point/initial boiling point/boiling range	-85 °C
Flammability	No data available.
Lower/Upper explosion limit	No data available.
Flash Point	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
pH	No data available.
Kinematic viscosity	No data available.
Solubility	No data available.
Partition coefficient n-octanol/water	No data available.
Vapour pressure	No data available.
Density/relative density	1.096
Relative vapour pressure	No data available.
Particle characteristics	No data available.

9.2 Other information

No data available.

10. Stability and reactivity

10.1 Reactivity

Stable under recommended transport or storage conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions

Decomposition may occur on exposure to conditions or materials listed below. Hazardous reactions will not occur under normal transport or storage conditions.

10.4 Conditions to avoid

Heat.

10.5 Incompatible materials

Materials to avoid

Strong acids. Strong oxidising agents.

11. Toxicological information

11.1 Information on toxicological effects

a) Acute toxicity

Hydrogen chloride

1 hr LC50 Rat (Inhalation): 3124 ppm

1 hr LC50 Mouse (Inhalation): 1108 ppm

LD50 Mouse (IP): 1449 mg/kg

LD50 Rabbit (Oral): 900 mg/kg

LD50 Rat (Oral): 700 mg/kg

Hydrogen chloride (gas and aerosol mists)

1 hr LC50 Rat (Inhalation): 3124 ppm

1 hr LC50 Mouse (Inhalation): 1108 ppm

LD50 Mouse (IP): 1449 mg/kg

LD50 Rabbit (Oral): 900 mg/kg

LD50 Rat (Oral): 700 mg/kg

b) Skin corrosion/irritation

No data available.

c) Serious eye damage/irritation

No data available.

d) Respiratory or skin sensitisation

No data available.

e) Germ cell mutagenicity

No data available.

f) Carcinogenicity

No data available.

g) Reproductive toxicity

No data available.

h) STOT-single exposure

No data available.

i) STOT-repeated exposure

No data available.

j) Aspiration hazard

No data available.

11.2 Symptoms / routes of exposure

Skin contact	Blistering may occur. Progressive ulceration will occur if treatment is not immediate.
Eye contact	Corneal burns may occur. May cause permanent damage.
Ingestion	Blood may be vomited. Corrosive burns may appear around the lips. There may be bleeding from the mouth or nose.
Inhalation	Exposure may cause coughing or wheezing. There may be shortness of breath with a burning sensation in the throat.
Delayed / immediate effects	Immediate effects can be expected after short-term exposure. There may be bleeding from the mouth or nose.

Other information No data available.

12. Ecological information

12.1 Toxicity

No data available.

12.2 Persistence and degradability

Biodegradable.

12.3 Bioaccumulative potential

No bioaccumulation potential.

12.4 Mobility in soil

Readily absorbed into soil.

12.5 Results of PBT and vPvB assessment

This substance is not identified as a PBT substance.

12.6 Endocrine disrupting properties

This substance is not identified as having endocrine disrupting properties

12.7 Other adverse effects

No data available.

13. Disposal considerations

13.1 Waste treatment methods






Disposal operations

Transfer to a suitable container and arrange for collection by specialised disposal company.

NB

The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

14. Transport information

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN1789	UN1789	UN1789	UN1789	UN1789
14.2. UN proper shipping name				
HYDROCHLORIC ACID	HYDROCHLORIC ACID	Hydrochloric acid	HYDROCHLORIC ACID	HYDROCHLORIC ACID
Transport document description				
UN1789 HYDROCHLORIC ACID, 8, III	UN1789 HYDROCHLORIC ACID, 8, III	UN1789 Hydrochloric acid, 8, III	UN1789 HYDROCHLORIC ACID, 8, III	UN1789 HYDROCHLORIC ACID, 8, III
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
III	III	III	III	III

14.5. Environmental hazards

No No No No No

15. Regulatory information

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

This Safety Data Sheet is prepared in accordance with Commission Regulation (EC) 1907/2006, amended by Commission Regulation (EU) 2020/787.

Authorisations/Restrictions

Regulation (EC) 1907/2006, REACH, Annex XIV list of substances subject to authorisation: No data available.

Regulation (EC) 1907/2006, REACH, Annex XVII restrictions on the manufacture, placing on the market and use of certain dangerous substances: No data available.

Regulation (EC) 1005/2009 on substances that deplete the ozone layer: No data available.

Regulation (EC) 850/2004 on persistent organic pollutants, amended by (EU) No 2019/1021: No data available.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

16. Other information

H-Statement Full Texts

H290 May be corrosive to metals
H314 Causes severe skin burns and eye damage
H335 May cause respiratory irritation

Abbreviations Full Texts

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR European Agreement concerning the International Carriage of Dangerous Goods by Road
ALARP As low as is reasonably practicable
CAS Chemical Abstracts Service
CLP Classification, Labelling and Packaging Regulations
COSHH Control of Substances Hazardous to Health
EC Number European Community Number
EC50 Effective Concentration 50%
EILINCS European List of Notified Chemical Substances
EINECS European Inventory of Existing Commercial Chemical Substances
GHS Globally Harmonised System
HSE Health & Safety Executive UK
IATA International Air Transport Association
IM Intramuscular
IMDG The International Maritime Dangerous Goods Code
IP Intraperitoneal
IV Intravascular
LD50 Lethal Dose 50%
LOEC Lowest Observable Effective Concentration
LTEL Long Term Exposure Limit
NOEC No Observable Effective Concentration
OECD Organisation for Economic Cooperations and Development
PBT Persistent Bioaccumulative Toxic
PPE Personal Protective Equipment
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals
RID Regulations Concerning the International Carriage of Dangerous Goods by Rail
SC Subcutaneous
SDS Safety Data Sheet
STEL Short Term Exposure Limit
VOC Volatile Organic Compounds
vPvB Very Persistent and Very Bioaccumulative
WEL Workplace Exposure Limits

This Safety Data Sheet is prepared in accordance with Commission Regulation (EC) 1907/2006, amended by Commission Regulation (EU) 2020/787.

Disclaimer: Glentham Life Sciences shall not be held liable for any damage resulting from handling or from contact with the above product. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This document does not guarantee the properties or quality of the product.