

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2022

Version number 2

Revision: 08.04.2022

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

- **1.1 Product identifier**
- **Molecular formula:** H₂O
- **Structure formula:** HOH
- **Trade name:** Hydrochloric acid 13-16%
- **SDS number:** CH5031
- **Application of the substance / the mixture** Chemicals products for laboratory

- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
CARLO ERBA REAGENTS
Chaussée du Vexin
Parc d'Affaires des Portes - BP616
27106 VAL DE REUIL Cedex
Téléphone: +33 (0)2 32 09 20 00
Télécopie: +33 (0)2 32 09 20 20
- **Further information obtainable from:**
Q.A / Normative
email: MSDS_CER-SDS@cer.dgroup.it
- **1.4 Emergency telephone number:**
Ireland - Tel : 00 353 1 8092568 - 00 353 1 8379964 (24h/24)
EU Tel : 112
National Poisons Information Centre: +353 (1) 809 2166 (8.00 a.m. to 10.00 p.m. 7 days a week)
Healthcare Professionals: +353 (1) 809 2566 (24 hour service)
National Poisons Information Service
+44 121 507 4123
Members of the public seeking specific information on poisons should contact:
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Met. Corr.1 H290 May be corrosive to metals.



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2022

Version number 2

Revision: 08.04.2022

Trade name: Hydrochloric acid 13-16%

(Contd. of page 1)

Hazard pictograms


GHS05 GHS07

Signal word Warning

Hazard-determining components of labelling:

hydrochloric acid

Hazard statements

H290 May be corrosive to metals.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves / eye protection / face protection.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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
Results of PBT and vPvB assessment
PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures
Description:

Mixture made by the following substances:

CAS: 7732-18-5	water, distilled, conductivity or of similar purity	≤100%
EINECS: 231-791-2		
RTECS: ZC 0110000		

Dangerous components:

EINECS: 231-595-7	hydrochloric acid	13-<16%
Index number: 017-002-01-X	Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318;	
RTECS: MW 9620000	STOT SE 3, H335	
Reg.nr.: 01-2119484862-27		

SECTION 4: First aid measures

4.1 Description of first aid measures
After inhalation: In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly. Wash contaminated clothing before reuse.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2022

Version number 2

Revision: 08.04.2022

Trade name: Hydrochloric acid 13-16%

(Contd. of page 2)

Seek immediate medical advice.

· **After swallowing:**

Call for a doctor immediately.

Rinse out mouth and then drink plenty of water.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

· **5.3 Advice for firefighters**

· **Protective equipment:** Do not inhale gases in case of fire or combustion.

· **Additional information** Keep receptacles cool with water spray.

SECTION 6: Accidental release measures

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

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation.

Ensure adequate ventilation

· **6.2 Environmental precautions:**

Do not allow to penetrate the ground/soil.

Dilute with plenty of water after collecting the liquid.

Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**

Collect the liquid with vacuum in a suitable container and absorb the remainder with a porous material (diatomite, acid binders, universal binders, etc).

Ensure adequate ventilation.

· **6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:** The product is not flammable.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**

Provide acid-resistant floor.

Provide floor trough without outlet.

Use only receptacles specifically permitted for this substance/product.

· **Information about storage in one common storage facility:**

Do not store together with alkalis (caustic solutions).

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2022

Version number 2

Revision: 08.04.2022

Trade name: Hydrochloric acid 13-16%

(Contd. of page 3)

- **Further information about storage conditions:** Protect from frost.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

- The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Do not inhale dust / smoke / mist.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

Use suitable respiratory protective device only when aerosol or mist is formed.



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Suitable respiratory protective device recommended in case of leakages or handling in open devices.
Use suitable respiratory protective device in case of insufficient ventilation.

- **Protection of hands:**

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation



Protective gloves

- **Rubber gloves**

Avoid direct contact with the chemical/ the product/ the preparation by organisational measures.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **For the permanent contact gloves made of the following materials are suitable:**

The penetration time has to be at least 480 minutes

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.5 mm

Fluorocarbon rubber (Viton)

Recommended thickness of the material: ≥ 0.4 mm

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.35 mm

PVC gloves

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2022

Version number 2

Revision: 08.04.2022

Trade name: Hydrochloric acid 13-16%

(Contd. of page 4)

Recommended thickness of the material: ≥ 0.5 mm

· **Eye protection:**



Tightly sealed goggles

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

In case of unintended release of the product: See section 6 of the Safety Data Sheet.

· **Risk management measures** Keep good industrial hygiene.

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

Molecular weight 18.02 g

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Pungent

· **Odour threshold:** Not determined.

· **pH-value at 20 °C:** <3

· **Change in condition**

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: 100 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Not applicable.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure:** Not determined.

· **Vapour pressure (2) at 50 °C:** 123 hPa

· **Density at 20 °C:** 1.074 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with water:** Fully miscible.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

Dynamic at 20 °C: 0.952 mPas

Kinematic: Not determined.

· **Solvent separation test:**

Water: 85.0 %

Solids content: 0.0 %

· **9.2 Other information** No further relevant information available.

GB

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 08.04.2022

Version number 2

Revision: 08.04.2022

Trade name: Hydrochloric acid 13-16%

(Contd. of page 5)

SECTION 10: Stability and reactivity

- **10.1 Reactivity** See 10.3
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with various metals.
Corrosive action on metals.
Reacts dangerously with alkali (lyes) or amines in bulk.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Metals
- **10.6 Hazardous decomposition products:** Hydrogen chloride (HCl)

* SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Strong irritant with the danger of severe eye injury.
Irritating effect.
Causes serious eye irritation.
- **Inhalation:**
Harmful if inhaled. May cause respiratory tract irritation.
May cause respiratory irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Target organ information**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

* SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **Method**
- **Ecological information** Not available
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2022

Version number 2

Revision: 08.04.2022

Trade name: Hydrochloric acid 13-16%

(Contd. of page 6)



Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system. Reutilise if possible or contact a waste processors for recycling or safe disposal.
- **Uncleaned packaging:**
The containers and packaging materials contaminated with dangerous substances or preparations, have the same treatment of products.
Directive 94/62/EC of the European Parliament and the Council of 20 December 1994 on packaging and packaging waste.
- **Recommendation:**
Disposal must be made according to official regulations.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

SECTION 14: Transport information

- **14.1 UN-Number**
- **ADR/RID, IMDG, IATA** UN1789
- **14.2 UN proper shipping name**
- **ADR/RID** 1789 HYDROCHLORIC ACID solution
- **IMDG** HYDROCHLORIC ACID solution
- **IATA** Hydrochloric acid solution
- **14.3 Transport hazard class(es)**
- **ADR/RID**
- 
- **Class** 8 (C1) Corrosive substances.
- **Label** 8
- **IMDG, IATA**
- 
- **Class** 8 Corrosive substances.
- **Label** 8
- **14.4 Packing group**
- **ADR/RID, IMDG, IATA** III

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2022

Version number 2

Revision: 08.04.2022

Trade name: Hydrochloric acid 13-16%

(Contd. of page 7)

· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	Strong acids
· Stowage Category	C
· Segregation Code	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR/RID	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 1789 HYDROCHLORIC ACID SOLUTION, 8, III

SECTION 15: Regulatory information

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

· **SARA Section 355 (extremely hazardous substances)**

hydrochloric acid

· **SARA Section 313 (specific toxic chemical listings)**

hydrochloric acid

· **Prop 65 - Chemicals known to cause cancer**

None of the ingredients is listed.

· **Chemical safety assessment**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **National regulations:**

· **Waterhazard class: Water hazard class 1 (Self-assessment):** slightly hazardous for water.

· **Other regulations, limitations and prohibitive regulations**

0.0 g/l

0.00 %

· **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

GB

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.04.2022

Version number 2

Revision: 08.04.2022

Trade name: Hydrochloric acid 13-16%

(Contd. of page 8)

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

- H290 May be corrosive to metals.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H335 May cause respiratory irritation.

· **Department issuing SDS: Q.A./Normative**

· **Abbreviations and acronyms:**

- ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- PBT: Persistent, Bioaccumulative and Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- IMO: International Maritime Organization
- Met. Corr. 1: Corrosive to metals – Category 1
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Skin Irrit. 2: Skin corrosion/irritation – Category 2
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**

- Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006, GB REACH, in latest valid version.
- Regulation (EC) N° 1272/2008 of the European Parliament and of the Council of 16 December 2008, GB CLP, in the latest valid version.
- Globally Harmonized System, GHS
- ADR/RID, IMDG, IATA
- PubChem: an open chemistry database at the National Institutes of Health (NIH)
- ECHA: European Chemicals Agency
- GESTIS: Information system on hazardous substances of the German Social Accident Insurance

· *** Data compared to the previous version altered. .**