

Hydrochloric acid solution

35328-1L

Version 1.3

Revision Date 16.12.2022

Corrosive to metals Category 1
H290 May be corrosive to metals.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms



Signal word : Warning

Hazard statements : H290 May be corrosive to metals.

Precautionary statements : P234 Keep only in original container.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
hydrochloric acid	7647-01-0 017-002-01-X 231-595-7	Skin Corr. 1B; H314 STOT SE 3; H335; Respiratory system	< 5 %	STOT SE 3; H335: >= 10 % Skin Irrit. 2; H315: 10 - < 25 % Eye Irrit. 2; H319: 10 - < 25 % Skin Corr. 1B; H314: >= 25 %

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Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Move out of dangerous area. Immediately take off contaminated clothing and rinse body with plenty of water.

Inhalation:

If inhaled, remove to fresh air. Call a physician if irritation develops or persists.

Skin contact:

After contact with skin, wash immediately with plenty of water. If symptoms persist, call a physician.

Eye contact:

Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Remove contact lenses. Call a physician immediately.

Ingestion:

Clean mouth with water and drink afterwards plenty of water. Call a physician immediately.

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

No data available

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

No data available

See Section 11 for more detailed information on health effects and symptoms.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water spray
Foam
Carbon dioxide (CO₂)
Dry powder

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

In case of fire hazardous decomposition products may be produced such as:
Hydrogen chloride gas

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

No unprotected exposed skin areas.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Wear personal protective equipment. Unprotected persons must be kept away. Ensure adequate ventilation.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.

6.3. Methods and materials for containment and cleaning up

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Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Use only acid resistant equipment. Exhaust ventilation at the object is necessary.

Advice on protection against fire and explosion:

Normal measures for preventive fire protection. Contact with metals liberates hydrogen gas.

Hygiene measures:

Take off all contaminated clothing immediately. Keep working clothes separately. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday. Avoid contact with the skin and the eyes. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:

Store in original container. Keep containers tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)

no additional data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
hydrochloric acid	EH40 WEL STEL	8 mg/m ³ 5 ppm Gas and aerosol mists.		
hydrochloric acid	EH40 WEL TWA	2 mg/m ³ 1 ppm Gas and aerosol mists.		
hydrochloric acid	EH40 WEL	Gas and aerosol mists.		Listed
hydrochloric acid	EU ELV TWA	8 mg/m ³ 5 ppm		Indicative
hydrochloric acid	EU ELV STEL	15 mg/m ³ 10 ppm		Indicative

STEL - Short term exposure limit
TWA - Time weighted average

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
hydrochloric acid	Workers / Acute local effects		15 mg/m ³	Inhalation	
hydrochloric acid	Workers / Long-term local effects		8 mg/m ³	Inhalation	
hydrochloric acid	Consumers / Acute local effects		15 mg/m ³	Inhalation	

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hydrochloric acid	Consumers / Long-term local effects		8 mg/m ³	Inhalation	
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No PNEC data available.

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Do not breathe vapours or spray mist.

Engineering measures

Use with local exhaust ventilation.

Personal protective equipment

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Hand protection:

Glove material: Chloroprene

Break through time: > 480 min

Glove thickness: 0,65 mm

Camapren®720

Gloves must be inspected prior to use.

Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer's directions for use should be observed because of great diversity of types .

Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:

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Safety goggles

Skin and body protection:

Wear suitable protective equipment.

Wear as appropriate:

Protective suit

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	odourless
molecular weight	:	36,46 g/mol
Melting point/range	:	< 0 °C
Boiling point/boiling range	:	ca. 100 °C at 1.013 hPa
Flammability	:	Not applicable
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	No decomposition if used as directed.
pH	:	acidic

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Auto-ignition temperature	:	not auto-flammable
Viscosity, kinematic	:	No data available
Water solubility	:	completely miscible
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	similar to water
Density	:	ca. 1,010 g/cm ³ at 20 °C
Bulk density	:	Not applicable
Relative vapour density	:	No data available

9.2 Other Information

Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Corrosive to metals	:	Corrosive to metals
Evaporation rate	:	No data available
Viscosity, dynamic	:	No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

No decomposition if used as directed.

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10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.
Gives off hydrogen by reaction with metals.

10.4. Conditions to avoid

Protect from extreme heat and cold.

10.5. Incompatible materials

Keep away from metals.
Reactions with strong alkalies and oxidising agents.

10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:
Hydrogen chloride gas

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

Classification based on Annex VI of regulation 1272/2008/EC.

Acute dermal toxicity:

Classification based on Annex VI of regulation 1272/2008/EC.

Acute inhalation toxicity:

LC50

Species: Rat

Value: 40989 ppm

Exposure time: 5 min

Test substance: anhydrous substance

LC50

Species: Rat

Value: 4701 ppm

Exposure time: 30 min

Test substance: anhydrous substance

Skin irritation:

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Classification based on Annex VI of regulation 1272/2008/EC.

Eye irritation:

Classification based on Annex VI of regulation 1272/2008/EC.

Respiratory or skin sensitisation:

Route of exposure: Dermal

Species: Guinea pig

Result: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

Aspiration hazard:

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information:

The product has not been tested. The information is derived from the properties of the individual components.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

Classification based on Annex VI of regulation 1272/2008/EC.

Toxicity to aquatic plants:

Classification based on Annex VI of regulation 1272/2008/EC.

Toxicity to Microorganisms:

Classification based on Annex VI of regulation 1272/2008/EC.

Toxicity to aquatic invertebrates:

Classification based on Annex VI of regulation 1272/2008/EC.

12.2. Persistence and degradability

No data available

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12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No information on ecology is available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006

For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number

ADR/RID:1789

IMDG:1789

IATA:1789

14.2 UN proper shipping name

ADR/RID:HYDROCHLORIC ACID
IMDG:HYDROCHLORIC ACID

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Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730
	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
Munich : 089/19240	
Latvia	+37167042473

Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420
Sweden	112 (begär Giftinformation);+46104566786
Switzerland	145
United Kingdom	(+44) 844 892 0111

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

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Japan. Kashin-Hou Law List

On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)

On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)

On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)

On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand

On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)

On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

hydrochloric acid : H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Further information

All directives and regulations refer to amended versions.

Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community

CAS Chemical Abstracts Service

DNEL Derived no effect level

PNEC Predicted no effect level

vPvB Very persistent and very biaccumulative substance

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PBT Persistent, bioaccumulative und toxic substance

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