



## Safety Data Sheet

### Hydrochloric Acid, 1.0 N

#### Section 1: Chemical Product and Company Identification

**Product Name:** Hydrochloric Acid, 1.0N

**Catalog Codes:** 715

**CAS#:** -

**RTECS:** -

**Synonym:** Hydrochloric Acid

**Chemical Name:** hydrogen chloride

**Chemical Formula:** HCl

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#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Hydrochloric Acid	-	20-25 %

**Toxicological Data on Ingredients:** LC50 - Leuciscus idus (Golden orfe) - 862 mg/l. LC50 - Leuciscus idus (Golden orfe) - 862 mg/l.

#### Section 3: Hazards Identification

**Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Corrosive to Metals (Category 1), H290

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

## Label elements

### Labelling according Regulation (EC) No 1272/2008

#### Pictogram



Signal word	Warning
Hazard statement(s)	
H290	May be corrosive to metals.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Precautionary statement(s)	
P234	Keep only in original packaging.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard Statements	none

### Reduced Labeling (<= 125 ml)

#### Pictogram



Signal word	Warning
Hazard statement(s)	none
Precautionary statement(s)	none
Supplemental Hazard Statements	none

### Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## Section 4: First Aid Measures

### Description of first-aid measures

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

#### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 3) and/or in section 11

#### Indication of any immediate medical attention and special treatment needed

No data available

## Section 5: Fire and Explosion Data

### Extinguishing media

#### Suitable extinguishing media

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

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

#### Special hazards arising from the substance or mixture

Hydrogen chloride gas

Not combustible.

#### Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Section 6: Accidental Release Measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: Protective equipment see section 8.

For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® H<sup>+</sup>, Merck Art. No. 101595). Dispose of properly. Clean up affected area.

### Reference to other sections

For disposal see section 13.

## Section 7: Handling and Storage

### Precautions for safe handling

#### Advice on safe handling

Observe label precautions.

#### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 3.

### Conditions for safe storage, including any incompatibilities

#### Storage conditions

No metal containers.

Tightly closed.

Recommended storage temperature see product label.

#### Storage class

Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

## Section 8: Exposure Controls/Personal Protection

### Control parameters

### Ingredients with workplace control parameters

## Exposure controls

## Personal protective equipment

### Eye/face protection

Safety glasses

### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

### Respiratory protection

Recommended Filter type: filter E-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

### Control of environmental exposure

Do not let product enter drains.

## Section 9: Physical and Chemical Properties

### Information on basic physical and chemical properties

a) Appearance	Form: liquid Color: colorless
b) Odor	stinging
c) Odor Threshold	0.8 - 5 ppm - Gaseous hydrogen chloride (HCl).
d) pH	< 1 at 20 °C

e) Melting point/freezing point	No data available
f) Initial boiling point and boiling range	No data available
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Density	1.09 g/cm <sup>3</sup> at 20 °C
Relative density	No data available
n) Water solubility	at 20 °C soluble
o) Partition coefficient: n-octanol/water	Not applicable
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
s) Explosive properties	Not classified as explosive.
t) Oxidizing properties	none

**Other safety information**  
No data available

## Section 10: Stability and Reactivity Data

### Reactivity

No data available

### Chemical stability

No data available

### Possibility of hazardous reactions

Risk of explosion with:

Alkali metals

conc. sulfuric acid

Risk of ignition or formation of inflammable gases or vapours with:

Carbides

lithium silicide

Fluorine

Generates dangerous gases or fumes in contact with:

Aluminum

hydrides

Formaldehyde

Metals

strong alkalis

Sulfides

Exothermic reaction with:

Amines

potassium permanganate

salts of oxyhalogenic acids

semimetallic oxides

semimetallic hydrogen compounds

Aldehydes

vinylmethyl ether

### Conditions to avoid

No data available

### Incompatible materials

Metals, metal alloys Gives off hydrogen by reaction with metals.

### Hazardous decomposition products

In the event of fire: see section 5

## Section 11: Toxicological Information

### Information on toxicological effects

#### Mixture

**Acute toxicity**

Oral: No data available

Inhalation: No data available

Dermal: No data available

**Skin corrosion/irritation**

Mixture causes skin irritation.

No data available

**Serious eye damage/eye irritation**

Mixture causes serious eye irritation.

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

Mixture may cause respiratory irritation. - Respiratory system

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

irritant effects, Cough, Shortness of breath  
slight irritation

Cough

Shortness of breath

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

**Components****hydrochloric acid****Acute toxicity**

Oral: No data available

Inhalation: Cough Difficulty in breathing

Inhalation: absorption



Symptoms: mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:, damage of respiratory tract, tissue damage

Dermal: No data available

**Skin corrosion/irritation**

Skin - reconstructed human epidermis (RhE)

Result: Corrosive

(OECD Test Guideline 431)

**Serious eye damage/eye irritation**

Eyes - Bovine cornea

Result: Corrosive

(OECD Test Guideline 437)

**Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

**Germ cell mutagenicity**

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Result: Conflicting results have been seen in different studies.

**Carcinogenicity**

Carcinogenicity - Did not show carcinogenic effects in animal experiments. (IUCRID)

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

May cause respiratory irritation.

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages:, damage of respiratory tract, tissue damage

**Specific target organ toxicity - repeated exposure**

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration hazard**

No aspiration toxicity classification

## Section 12: Ecological Information

### Toxicity

#### Mixture

Toxicity to fish

LC50 - Leuciscus idus (Golden orfe) - 862 mg/l

Remarks: (1 N solution)

#### Persistence and degradability

No data available

#### Bioaccumulative potential

No data available

#### Mobility in soil

No data available

#### Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

#### Other adverse effects

No data available

#### Components

##### hydrochloric acid

No data available

Toxicity to fish

LC50 - Gambusia affinis (Mosquito fish) - 282 mg/l - 96 h

Remarks: (IUCLID)

## Section 13: Disposal Considerations

### Waste treatment methods

#### Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

## Section 14: Transport Information

**UN number**

ADR/RID: 1789

IMDG: 1789

IATA: 1789

**UN proper shipping name**

ADR/RID: HYDROCHLORIC ACID

IMDG: HYDROCHLORIC ACID

IATA: Hydrochloric acid

**Transport hazard class(es)**

ADR/RID: 8

IMDG: 8

IATA: 8

**Packaging group**

ADR/RID: II

IMDG: II

IATA: II

**Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

**Special precautions for user**

No data available

## Section 15: Other Regulatory Information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**Chemical Safety Assessment**

A Chemical Safety Assessment has been carried out for this substance.

## Section 16: Other Information

**References:** Not available

**Other Special Considerations:** Not available

**Created:** 08/2022

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