

# SAFETY DATA SHEET

Version 8.6  
Revision Date 02.07.2024  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : Hydrochloric acid c(HCl) = 1 mol/l (1 N)  
Titripur® Reag. Ph Eur, Reag. USP

Product Number : 1.09057  
Catalogue No. : 109057  
Brand : Millipore  
CAS-No. : 7647-01-0

### 1.2 Other means of identification

No data available

### 1.3 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagent for analysis

### 1.4 Details of the supplier of the safety data sheet

Company : Merck Life Science Ltd  
Level 26 PwC Tower, 15 Customs Street West  
1010 AUCKLAND  
NEW ZEALAND

Telephone : 0800 936 666  
E-mail address : customersupport.anz@merckgroup.com

### 1.5 Emergency telephone

Emergency Phone # : 0800 425 459 (CHEMTREC NZ)  
+64 9 801 0034 (Int'l CHEMTREC)

## SECTION 2: Hazards identification

### 2.1 GHS Classification

Corrosive to Metals (Category 1), H290  
Skin corrosion/irritation (Category 1C), H314  
Serious eye damage/eye irritation (Category 1), H318

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

### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word : Danger

## Hazard Statements

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

## Precautionary Statements

### Prevention

P264 Wash skin thoroughly after handling.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

## 2.3 Other hazards - none

## SECTION 3: Composition/information on ingredients

Substance / Mixture : Mixture

### 3.2 Mixtures

#### Hazardous ingredients

Component	Classification	Concentration
<b>Hydrochloric Acid</b>		
CAS-No. 7647-01-0 EC-No. 231-595-7 Index-No. 017-002-00-2	Met. Corr. 1; Skin Corr./Irrit. 1B; Eye Dam./Irrit. 1; STOT SE 3; H290, H314, H318, H335 Concentration limits: >= 0.1 %: Met. Corr. 1, H290; >= 25 %: Skin Corr. 1B, H314; 10 - < 25 %: Skin Irrit. 2, H315; 10 - < 25 %: Eye Irrit. 2, H319; >= 10 %: STOT SE 3, H335; > 2 %: Met. Corr. 1, H290; > 10 %: Skin Corr./Irrit. 1B, H314; > 2 %: Eye Dam./Irrit. 1, H318; > 2 - 10 %: Skin Corr./Irrit. 1C, H314; > 0.5 - 2 %: Skin Corr./Irrit. 2, H315; > 0.5 - 2 %: Eye Dam./Irrit. 2, H319;	>= 3 - < 5 %

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## **SECTION 4: First aid measures**

### **4.1 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: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## **SECTION 5: Firefighting measures**

### **5.1 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.

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

Hydrogen chloride gas

Not combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Hydrogen chloride gas

### **5.3 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.

### **5.4 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.

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## SECTION 6: Accidental release measures

### 6.1 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.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 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.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Observe label precautions.

#### Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

For precautions see section 2.2.

### 7.2 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

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
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Hydrochloric Acid	7647-01-0	WES-Ceiling	5 ppm 7.5 mg/m <sup>3</sup>	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
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## 8.2 Exposure controls

### Appropriate engineering controls

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

### 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 EN 16523-1 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 EN 16523-1 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

#### Body Protection

protective clothing

#### Respiratory protection

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- a) Physical state                      liquid

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b) Color	colorless
c) Odor	odorless
d) Melting point/freezing point	No data available
e) Initial boiling point and boiling range	No data available
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	No data available
h) Flash point	No data available
i) Autoignition temperature	No data available
j) Decomposition temperature	No data available
k) pH	< 1 at 20 °C
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m) Water solubility	at 20 °C soluble
n) Partition coefficient: n-octanol/water	No data available
o) Vapor pressure	No data available
p) Density	1.02 g/cm <sup>3</sup> at 20 °C
Relative density	No data available
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	Not classified as explosive.
t) Oxidizing properties	none

## 9.2 Other safety information

No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See section 10.3

## 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

## 10.3 Possibility of hazardous reactions

Generates dangerous gases or fumes in contact with:

Metals

Violent reactions possible with:

The generally known reaction partners of water.

## 10.4 Conditions to avoid

no information available

## 10.5 Incompatible materials

Metals, metal alloys

## 10.6 Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

##### Acute toxicity

Oral: No data available

Inhalation: No data available

Dermal: No data available

##### Skin corrosion/irritation

Remarks: Possible damages:  
slight irritation

##### Serious eye damage/eye irritation

Remarks: Possible damages:  
slight 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

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

##### Specific target organ toxicity - repeated exposure

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

### **Aspiration hazard**

Based on available data the classification criteria are not met.

## **11.2 Additional Information**

irritant effects

However, when the product is handled appropriately, hazardous effects are unlikely to occur.

Handle in accordance with good industrial hygiene and safety practice.

## **Components**

### **Hydrochloric Acid**

#### **Acute toxicity**

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Inhalation: Cough Difficulty in breathing

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: Causes serious eye damage. - 10 min

(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: Positive results were obtained in some in vitro tests.

Remarks: (ECHA)

Test Type: mitotic recombination assay

Test system: Saccharomyces cerevisiae

Result: negative

Remarks: (ECHA)

Test Type: Ames test

Test system: mouse lymphoma cells

Result: positive

Remarks: (ECHA)

#### **Carcinogenicity**

No data available



**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

May cause respiratory irritation. - Respiratory system

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

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

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**SECTION 12: Ecological information****12.1 Toxicity****Mixture**

No data available

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Endocrine disrupting properties**

No data available

**12.7 Other adverse effects**

Discharge into the environment must be avoided.

**Components****Hydrochloric Acid**

Toxicity to fish

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

Remarks: (IUCLID)

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**SECTION 13: Disposal considerations****13.1 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. See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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**SECTION 14: Transport information****14.1 UN number**

ADR/RID: 1789                      IMDG: 1789                      IATA-DGR: 1789

**14.2 UN proper shipping name**

ADR/RID:                      HYDROCHLORIC ACID  
IMDG:                      HYDROCHLORIC ACID  
IATA-DGR:                      Hydrochloric acid

**14.3 Transport hazard class(es)**

ADR/RID: 8                      IMDG: 8                      IATA-DGR: 8

**14.4 Packaging group**

ADR/RID: III                      IMDG: III                      IATA-DGR: III

**14.5 Environmental hazards**

ADR/RID: no                      IMDG Marine pollutant: no                      IATA-DGR: no

**14.6 Special precautions for user**

None

**14.7 Incompatible materials**

Metals, metal alloys

**Other regulations**

Hazchem Code                      : 2R

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

HSNO Group Standard Approval: not required  
Tracking Required: not required  
Approved Handler Cert.: not required

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**SECTION 16: Other information**

**Training advice** Provide adequate information, instruction and training for operators.

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**Full text of H-Statements referred to under sections 2 and 3.**

- H290 May be corrosive to metals.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

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