

---

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifiers**

Product name : Hydrochloric acid

Product Number : V800203

Brand : Vetec

**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 : Laboratory chemicals, Manufacture of substances

**1.4 Details of the supplier of the safety data sheet**Company : Sigma-Aldrich Pty. Ltd.  
12 Anella Avenue  
CASTLE HILL NSW 2154  
AUSTRALIA

Telephone : +61 2 9841 0555 (1800 800 097)

Fax : +61 2 9841 0500 (1800 800 096)

**1.5 Emergency telephone number**

Emergency Phone # : Free call (24/7): 1800 448 465

Int'l (24/7) : +44 (0) 8701 906777

---

**2. HAZARDS IDENTIFICATION****2.1 GHS Classification**

Corrosive to metals (Category 1)

Skin corrosion/irritation (Category 1)

Serious eye damage/eye irritation (Category 1)

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

**2.2 GHS Label elements, including precautionary statements**

Pictogram



Signal word

Danger

Hazard statement(s)

H290

May be corrosive to metals.

H314

Causes severe skin burns and eye damage.

H335

May cause respiratory irritation.

## Precautionary statement(s)

### Prevention

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
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/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
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 or doctor/ physician.
P390	Absorb spillage to prevent material damage.

### Storage

P403 + P232 Store in a well-ventilated place. Keep container tightly closed.

### Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Other hazards - none

---

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

Molecular weight : 36.46 g/mol

Component	Classification	Concentration
<b>Hydrochloric acid</b>		
CAS-No.	7647-01-0	Met. Corr. 1; 1; STOT SE 3; H290, H314, H335
EC-No.	231-595-7	
Index-No.	017-002-01-X	
Registration number	01-2119484862-27-XXXX	
		>= 30 - < 50 %

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

---

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

- 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
- 

## **5. FIREFIGHTING MEASURES**

- 5.1 Extinguishing media**  
**Suitable extinguishing media**  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- 5.2 Special hazards arising from the substance or mixture**  
Hydrogen chloride gas
- 5.3 Advice for firefighters**  
Wear self-contained breathing apparatus for firefighting if necessary.
- 5.4 Further information**  
No data available
- 

## **6. ACCIDENTAL RELEASE MEASURES**

- 6.1 Personal precautions, protective equipment and emergency procedures**  
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.  
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**  
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
- 6.4 Reference to other sections**  
For disposal see section 13.
- 

## **7. HANDLING AND STORAGE**

- 7.1 Precautions for safe handling**  
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.  
For precautions see section 2.2.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
  
Metal containers must be lined. Corrodes metal.  
Storage class (TRGS 510): Non-combustible, corrosive hazardous materials
- 7.3 Specific end use(s)**  
Apart from the uses mentioned in section 1.3 no other specific.
- 

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- 8.1 Control parameters**  
**Occupational Exposure Limits**

Component	CAS-No.	Value	Control parameters	Basis
Hydrochloric acid	7647-01-0	Peak limit	5 ppm 7.5 mg/m <sup>3</sup>	Australia. Workplace Exposure Standards for Airborne Contaminants.

## 8.2 Exposure controls

### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### Personal protective equipment

#### Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |   |  |
|---|--|
| a) Appearance                                   | Form: liquid                                 |
| b) Odour  | pungent                                      |
| c) Odour Threshold                              | No data available                            |
| d) pH   | < 1  |
| e) Melting point/freezing point                 | Solidification / Setting point: -50 - -20 °C |
| 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)                    | No data available                            |
| j) Upper/lower flammability or explosive limits | No data available                            |

k)	Vapour pressure	No data available
l)	Vapour density	No data available
m)	Relative density	1.2 g/cm <sup>3</sup> at 25 °C
n)	Water solubility	completely miscible
o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	Not explosive
t)	Oxidizing properties	The substance or mixture is not classified as oxidizing.

## 9.2 Other safety information

No data available

---

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

Corrosive in contact with metals

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Exothermic reaction with: Amines, Aldehydes, permanganates, e.g. potassium permanganate, Risk of ignition or formation of inflammable gases or vapours with: Aluminium, Carbides, Fluorine, Metals, Bases, Sulphides, Risk of explosion with: Alkali metals, Sulphuric acid, Gives off hydrogen by reaction with metals.

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Metals

### 10.6 Hazardous decomposition products

Other decomposition products - No data available  
In the event of fire: see section 5

---

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available (Hydrochloric acid)

Inhalation: Inhalation may provoke the following symptoms: Respiratory irritation Cough Difficulty in breathing Pneumonia (Hydrochloric acid)

#### Skin corrosion/irritation

Skin - Rabbit (Hydrochloric acid)

Result: Causes burns.

#### Serious eye damage/eye irritation

Eyes - Rabbit (Hydrochloric acid)

Result: Corrosive to eyes

**Respiratory or skin sensitisation**

Did not cause sensitisation on laboratory animals. (Hydrochloric acid)

**Germ cell mutagenicity**

No data available (Hydrochloric acid)

**Carcinogenicity**

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. (Hydrochloric acid)

(Hydrochloric acid)

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid)

**Reproductive toxicity**

No data available (Hydrochloric acid)

**Specific target organ toxicity - single exposure**

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. (Hydrochloric acid)

**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 (Hydrochloric acid)

**Additional Information**

RTECS: Not available

Inhalation of vapors may cause: burning sensation, Cough, wheezing, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema (Hydrochloric acid)

---

**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

Toxicity to fish LC50 - *Lepomis macrochirus* (Bluegill) - 24.6 mg/l - 96 h (Hydrochloric acid)

Toxicity to daphnia and other aquatic invertebrates EC50 - *Daphnia magna* (Water flea) - 4.91 mg/l - 48 h (Hydrochloric acid)

**12.2 Persistence and degradability**

No data available

**12.3 Bioaccumulative potential**

No data available

**12.4 Mobility in soil**

No data available (Hydrochloric acid)

**12.5 Results of PBT and vPvB assessment**

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

**12.6 Other adverse effects**

May be harmful to aquatic organisms due to the shift of the pH. Do not empty into drains.

---

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**  
Dispose of as unused product.

---

**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: II    IMDG: II    IATA-DGR: II

**14.5 Environmental hazards**

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

**14.6 Special precautions for user**

No data available

---

**15. REGULATORY INFORMATION**

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

**Standard for the Uniform Scheduling of Medicines and Poisons**

No data available

**Carcinogen classification under WHS Regulation 2011, Schedule 10**

Not listed

**Notification status**

**AICS:**    On the inventory, or in compliance with the inventory  
**DSL:**    All components of this product are on the Canadian DSL  
**ENCS:**    Not in compliance with the inventory - Water  
**IECSC:**    On the inventory, or in compliance with the inventory  
**ISHL:**    Not in compliance with the inventory - Water  
**KECI:**    On the inventory, or in compliance with the inventory  
**NZIoC:**    On the inventory, or in compliance with the inventory  
**PICCS:**    On the inventory, or in compliance with the inventory

---

**16. OTHER INFORMATION**

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

	Skin corrosion/irritation
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
Met. Corr.	Corrosive to metals
STOT SE	Specific target organ toxicity - single exposure

**Further information**

Copyright 2015 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

---