

# Safety Data Sheet

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Trade name/designation:	HYDROCHLORIC ACID laboratory reagent
Product No.:	H0100
Synonymes:	none
CAS No.	7647-01-0

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

**Relevant identified uses:** For Laboratory, Research or Manufacturing Use.

**1.3 Details of the supplier of the safety data sheet****Supplier****Avantor Performance Materials India Ltd.**

Street	501, 5th floor, Tiffany Building, Hiranandani Business Park,
Postal code/City	Thane, Maharashtra - 400607, India
Telephone	022-41288100

**Emergency phone number**

Telephone	1800105561
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**Preparation Information**

Product Information Compliance

**1.4 E-mail** [SDS@avantorsciences.com](mailto:SDS@avantorsciences.com)

**SECTION 2: Hazard identification**

**2.1 Classification of the substance or mixture**

**Physical hazards**

Substance or mixture corrosive to metals, category 1

**Health hazards**

Skin corrosion, category 1B

Specific target organ toxicity (single exposure), category 3, Respiratory tract irritation

**2.2 Label elements**

**Hazard pictograms**



**Signal word:** Danger

**Hazard statements**

H290 - May be corrosive to metals.

H314 - Causes severe skin burns and eye damage.

H335 - May cause respiratory irritation.

**Precautionary statements**

**Prevention:**

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**

P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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

P308+P310 - IF exposed or concerned: Immediately call a POISON CENTER/doctor.

**2.3 Other hazards**      none

**SECTION 3: Composition / information on ingredients**

**Substances**

not applicable

**Mixtures**

**Composition / Information on ingredients**

Substance name	Identifier	Concentration
Hydrochloric acid	CAS No.: 7647-01-0	30 - 40%

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**General information**

IF exposed: Immediately call a POISON CENTRE/doctor. If unconscious but breathing normally, place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

**After inhalation**

Immediately call a POISON CENTRE/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

**In case of skin contact**

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

**After eye contact**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

**In case of ingestion**

Immediately call a POISON CENTRE/doctor. Do NOT induce vomiting. Rinse mouth thoroughly with water. Give nothing to eat or drink.

**Self-protection of the first aider**

First aider: Pay attention to self-protection!

**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

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media**

The product itself does not burn.  
Co-ordinate fire-fighting measures to the fire surroundings.

**Extinguishing media which must not be used for safety reasons**

no restriction

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

In case of fire may be liberated:  
Hydrogen chloride (HCl)

**5.3 Advice for firefighters**

DO NOT fight fire when fire reaches explosives.  
Special protective equipment for firefighters  
Wear a self-contained breathing apparatus and chemical protective clothing.

**5.4 Additional information**

Do not allow run-off from fire-fighting to enter drains or water courses.  
Do not inhale explosion and combustion gases.  
Use water spray jet to protect personnel and to cool endangered containers.  
In case of fire: Evacuate area.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

In case of major fire and large quantities: Remove persons to safety. Wear a self-contained breathing apparatus and chemical protective clothing.

**6.2 Environmental precautions**

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

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

Spilled product must never be returned to the original container for recycling. Clean contaminated articles and floor according to the environmental legislation. Soak up inert absorbent and dispose as waste requiring special attention.

**6.4 Additional information**

Clear spills immediately.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Avoid:

Inhalation

Avoid contact with eyes and skin.

Use extractor hood (laboratory).

If handled uncovered, arrangements with local exhaust ventilation have to be used.

If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means.

Protect from moisture.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

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

Recommended storage temperature: Keep bottles tightly closed and away from sources of ignition and heat.

Keep container tightly closed and in a well-ventilated place. Corrosive to metals

### 7.3 Specific end use(s)

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

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Does not contain substances above concentration limits fixing an occupational exposure limit.

### 8.2 Exposure controls

#### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

#### Personal protection equipment

Wear suitable protective clothing. When handling with chemical substances, protective clothing with CE-labels including the four control digits must be worn.

##### *Eye/face protection*

Eye glasses with side protection

##### *Skin protection*

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

##### By short-term hand contact

Suitable material:	CR (polychloroprene, chloroprene rubber)
Thickness of the glove material:	0,13 mm
Breakthrough time:	101 min

##### By long-term hand contact

Suitable material:	CR (polychloroprene, chloroprene rubber)
Thickness of the glove material:	-
Breakthrough time:	> 480 min

##### *Respiratory protection*

no data available

##### *Additional information*

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

##### *Environmental exposure controls*

no data available

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Colour:	colourless
(b) Odour:	no data available
(c) Odour threshold:	no data available

### Safety relevant basic data

(d) pH:	no data available
(e) Melting point/freezing point:	no data available
(f) Initial boiling point and boiling range:	no data available
(g) Flash point:	no data available
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	not applicable
(j) Flammability or explosive limits	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
(k) Vapour pressure:	no data available
(l) Vapour density:	no data available
(m) Density:	1.18 g/cm <sup>3</sup> (20 °C)
(n) Solubility(ies)	
Water solubility:	no data available
(o) Partition coefficient: n-octanol/water:	no data available
(p) Auto-ignition temperature:	no data available
(q) Decomposition temperature:	not applicable
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	no data available
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable
(u) Particle characteristics	not applicable - no nanoform/not combustible

### 9.2 Other information

Bulk density:	no data available
Refraction index:	no data available
Dissociation constant:	no data available
Surface tension:	no data available
Henry's Law Constant:	no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Corrosive to metals

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

Explosive reaction with:  
Alkali metals

Alkaline earth metal  
Alkali (lye)  
Violent reaction with:  
light metals  
Powdered metals  
Exothermic reaction with:  
Water  
Substance, organic

**10.4 Conditions to avoid**

Humidity

**10.5 Incompatible materials**

Metal

**10.6 Hazardous decomposition products**

no data available

**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute effects**

*Acute oral toxicity:*

no data available

*Acute dermal toxicity:*

Hydrochloric acid - LD50: > 5010 mg/kg - Rabbit - (Japan GHS Basis for Classification Data)

*Acute inhalation toxicity:*

Hydrochloric acid - LC50: 8.3 mg/l (30 min) - Rat - (IUCLID)

Hydrochloric acid - LC50: 45.6 mg/l (5 min) - Rat - (IUCLID)

**Irritant and corrosive effects**

*Primary irritation to the skin:*

Causes severe skin burns and eye damage.

*Irritation to eyes:*

Causes serious eye damage.

*Irritation to respiratory tract:*

May cause respiratory irritation.

**Respiratory or skin sensitisation**

In case of skin contact: not sensitising

After inhalation: not sensitising

**STOT-single exposure**

May cause respiratory irritation.

**STOT-repeated exposure**

not applicable

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)****Carcinogenicity**

No indication of human carcinogenicity.

**Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available

**SECTION 12: Ecological information****12.1 Ecotoxicity****Fish toxicity:**

no data available

**Daphnia toxicity:**

Hydrochloric acid - LC50: 250 mg/l (48 h) - Portmann, J.E., and K.W. Wilson 1971. The Toxicity of 140 Substances to the Brown Shrimp and Other Marine Animals. Shellfish Information Leaflet No.22 (2nd Ed.):12 p.

Hydrochloric acid - EC50: 0.45 (pH: 4.9) mg/l (48 h) Daphnia Magna - OECD 202

**Algae toxicity:**

Hydrochloric acid - EC50: 0.73 (pH: 4.7) mg/l (72 h) freshwater - OECD 201

Hydrochloric acid - NOEC: mg/l (72 h) freshwater - OECD 201

**Bacteria toxicity:**

no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

Partition coefficient: n-octanol/water: no data available

**12.4 Mobility in soil:**

no data available

**12.5 Results of PBT/vPvB assessment**

not applicable

**12.6 Other adverse effects**

no data available

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Appropriate disposal / Product**

Dispose according to local legislation. Consult the appropriate local waste disposal expert about waste disposal.

**Appropriate disposal / Package**

Dispose according to local legislation. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

14.1	UN-No.:	1789
14.2	Proper Shipping Name:	HYDROCHLORIC ACID
14.3	Class(es):	8
	Classification code:	C1
	Hazard label(s):	8
14.4	Packing group:	II
14.5	Environmental hazards:	No
14.6	Special precautions for user:	
	Hazard identification number (Kemler No.):	80
	tunnel restriction code:	E
		(Passage forbidden through tunnels of category E.)

**Sea transport (IMDG)**

14.1	UN-No.:	1789
14.2	Proper Shipping Name:	HYDROCHLORIC ACID
14.3	Class(es):	8
	Classification code:	
	Hazard label(s):	8
14.4	Packing group:	II
14.5	Environmental hazards:	No
	Marine pollutant:	No
14.6	Special precautions for user:	
	Segregation group:	1
	EmS-No.	F-A S-B
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	
	not relevant	

**Air transport (ICAO-TI / IATA-DGR)**

14.1	UN-No.:	1789
14.2	Proper Shipping Name:	HYDROCHLORIC ACID
14.3	Class(es):	8
	Classification code:	
	Hazard label(s):	8
14.4	Packing group:	II
14.5	Special precautions for user:	

**SECTION 15: Regulatory information**

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

**SECTION 16: Other information**

**Abbreviations and acronyms**

- ACGIH - American Conference of Governmental Industrial Hygienists
- ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
- AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)
- CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures
- DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)
- DNEL - Derived No Effect Level
- Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)
- IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
- ICAO-TI - International Civil Aviation Organization-Technical Instructions
- IMDG - International Maritime Code for Dangerous Goods
- KOSHA - Korea Occupational Safety and Health Agency
- LTV - Long Term Value
- NIOSH - National Institute for Occupational Safety and Health
- OSHA - Occupational Safety & Health Administration
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- RID - Regulation concerning the International Carriage of Dangerous Goods by Rail
- STV - Short Term Value
- SVHC - Substances of Very High Concern
- vPvB - very Persistent, very Bioaccumulative

**Key literature references and sources for data**

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

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1.1

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2022-01-06

**Additional information**

Indication of changes:

Section 2

If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

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