

# Safety Data Sheet

According to Hazardous Products Regulation (SOR/2015-17)

Revision date: 20.06.2024

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## SECTION 1: Identification

### Product identifier

Trade name/designation:	Hydrochloric acid 0.2 N
Product No.:	BDH7593-1, BDH7593-4
Synonyms:	none
CAS No.:	7647-01-0
Other means of identification:	

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

Recommended use:	For Further Manufacturing Use Only
Uses advised against:	Not for Human or Animal Drug Use

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

#### Supplier

##### **VWR International**

Street	2360 Argentia Road
Postal code/City	Mississauga, Ontario
	Canada L5N 5Z7
Telephone	+1-800-932-5000 toll-free within US/Canada
Telefax	+1-610-728-2103

### Emergency phone number

Telephone +1-613-996-6666 (Canutec, 24 hrs/day, 7 days/week, Canada)

### Preparation Information

VWR International - Product Information Compliance

E-mail SDS@avantorsciences.com

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

#### Classification according to Hazardous Products Regulation (SOR/2015-17)

Hazard classes and hazard categories	Hazard statements
Substance or mixture corrosive to metals, category 1	H290

### 2.2 Label elements

#### Labelling in accordance with (SOR/2015-17)

#### Hazard pictograms



Signal word: Warning

Hazard statements	
H290	May be corrosive to metals.

Precautionary statements	
P234	Keep only in original container.
P390	Absorb spillage to prevent material damage.
P406	Store in a corrosion-resistant container with a resistant inner liner.

#### Hazard(s) not otherwise classified (HNOC)

none

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

Hazardous ingredients GHS Classification in accordance with (SOR/2015-17)

Substance name	Concentration	Identifier	Hazard classes and hazard categories
Hydrochloric acid	0.1-<10%	CAS No.: 7647-01-0	Met. Corr. 1 - H290 Skin Corr. 1B - H314 STOT SE 3 - H335

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

When in doubt or if symptoms are observed, get medical advice. Change contaminated, saturated clothing. Wash contaminated clothing before reuse. Do not leave affected person unattended.

#### In case of inhalation

Remove casualty to fresh air and keep warm and at rest. Obtain medical attention if symptoms appear.

#### In case of skin contact

Gently wash with plenty of soap and water. In case of skin reactions, consult a physician.

#### After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. Obtain medical attention if symptoms appear.

#### In case of ingestion

Rinse mouth thoroughly with water. Call a doctor if you feel unwell.

#### Self-protection of the first aider

First aider: Pay attention to self-protection!

### 4.2 Most important symptoms/effects, acute and delayed

No known symptoms to date.

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

No special information on medical attention and special treatment available.

## SECTION 5: Fire fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.  
Fight fire with normal precautions from a reasonable distance.  
Water spray.  
Dry extinguishing powder.

Alcohol resistant foam.  
Carbon dioxide (CO<sub>2</sub>).

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

Full water jet.

## 5.2 Specific hazards arising from the chemical

No further relevant information available.

In case of fire may be liberated:

Hydrogen chloride (HCl)

## 5.3 Advice for firefighters

Non-combustible corrosive substances (liquid).

Corrosive to metals.

Do not breathe gas/fume/vapor/spray.

Protective equipment and precautions for firefighters:

Wear a self-contained breathing apparatus and chemical protective clothing.

Do not allow run-off from fire-fighting to enter drains or water courses.

Use water spray jet to protect personnel and to cool endangered containers.

Do not allow run-off from fire-fighting to enter drains or water courses.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Wear personal protection equipment (refer to section 8). Avoid contact with eyes and skin. Do not breathe gas/fume/vapor/spray. Remove victim out of the danger area. Stop leak if safe to do so.

### 6.2 Environmental precautions

Do not allow to enter into surface water or drains.

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

Large spills: Dike or dam to contain for later disposal. Take up mechanically, placing in appropriate containers for disposal. Small spills: Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Dispose according to legislation.

### 6.4 Reference to other sections

Personal protection equipment (PPE): see section 8 Disposal information: see section 13 Decomposition products in case of fire: see section 5.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advices on safe handling  
Avoid contact with eyes and skin.  
Do not breathe vapor.  
Do not inhale spray vapor.  
Use personal protective equipment as required.  
Measures to prevent fire, aerosol and dust generation  
Usual measures for fire prevention.  
Measures required to protect the environment  
Do not empty into drains.  
Collect spillage.

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: 15-25 °C  
Storage: Store in a dry place. Store in a closed container. Keep only in original container. Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Packaging materials: Polyethylene Unsuitable materials and coatings of containers/equipment: No information available.

### 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 Engineering 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 (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing 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. 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:	NBR (Nitrile rubber)
Thickness of the glove material:	0,12 mm
Breakthrough time	> 30 min

By long-term hand contact

Suitable material:	NBR (Nitrile rubber)
Thickness of the glove material:	0,38 mm
Breakthrough time	> 480 min

*Respiratory protection*

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

*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

Appearance	
Physical state:	liquid
Color:	colorless
Odor:	no data available

#### Safety relevant basic data

pH:	no data available
Melting point/freezing point:	no data available
Initial boiling point and boiling range:	no data available
Flash point:	no data available
Flammability:	Not applicable
Lower and upper explosion limit	
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Vapor pressure:	no data available
Relative vapour density:	no data available
Density and/or relative density	
Density:	1.003 g/cm <sup>3</sup> (20 °C)
Solubility(ies)	
Water solubility:	no data available
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	Not applicable
Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	no data available
Particle characteristics:	does not apply to liquids

### 9.2 Other information

Evaporation rate:	no data available
Explosive properties:	no data available
Oxidising properties:	Not applicable
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

Endothermic decomposition with formation of:

Hydrogen chloride (HCl)

Chlorine (Cl<sub>2</sub>)

Hydrogen

# 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:*

Not applicable

*Irritation to eyes:*

Not applicable

*Irritation to respiratory tract:*

Not applicable

**Respiratory or skin sensitization**

In case of skin contact: not sensitizing

In case of inhalation: not sensitizing

**STOT-single exposure**

Not applicable

**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

**Additional information**

no data available

## SECTION 12: Ecological information

### 12.1 Toxicity

**Fish toxicity:**

Hydrochloric acid - LC50: 20,5 mg/l (96 h) - Lepomis macrochirus - ECHA

**Daphnia toxicity:**

Hydrochloric acid - LC50: 250 mg/l (48 h) - Daphnia magna - 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, Ministry of Agric.Fish.Food, Fish.Lab.Burnham-on-Crouch (2 ed./12).

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) - OECD 201

Hydrochloric acid - NOEC: 0,364 (pH:5) mg/l (72 h) - Chlorella vulgaris - ECHA (OECD 201; 2008)

**Bacteria toxicity:**

Hydrochloric acid - EC50: 0,23 (pH: 5,2) mg/l (3 h) - OECD 209

**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 Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to the environment.

**12.7 Other adverse effects**

no data available

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**

**Appropriate disposal / Product**

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal. Before discharge into sewage plants the product normally needs to be neutralised.

Waste code product: no data available

**Appropriate disposal / Package**

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

**Additional information**

none

No further relevant information available.

## SECTION 14: Transport information

### Land transport (TDG)

UN-No.:	1789
Proper Shipping Name:	HYDROCHLORIC ACID
Class(es):	8
Packing group:	III
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	

### Sea transport (IMDG)

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

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

UN-No.:	1789
Proper Shipping Name:	HYDROCHLORIC ACID
Class(es):	8
Classification code:	
Hazard label(s):	8
Packing group:	III
Special precautions for user:	

## SECTION 15: Regulatory information

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

Domestic Substance List:

## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists  
DOT - Department of Transportation  
IARC - International Agency for Research on Cancer  
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations  
ICAO-TI - International Civil Aviation Organization-Technical Instructions  
IMDG - International Maritime Code for Dangerous Goods  
LTV - Long Term Value  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety & Health Administration  
PBT - Persistent, Bioaccumulative and Toxic  
PEL - Permissible Exposure Limit  
STV - Short Term Value  
SVHC - Substances of Very High Concern  
TDG - Transport of Dangerous Goods  
TLV - Threshold Limit Value  
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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### Additional information

Indication of changes                      Review and revision of Sections 4, 5, 6, 7 and 10.  
  
If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

*The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state 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. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.*