

# HYDROCHLORIC ACID 0.1 MOL/L (0.1 N)

## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 01/06/2022 Version: 1.0

Doc. No: SDS-932.13V/2



### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Product name : HYDROCHLORIC ACID 0.1 MOL/L (0.1 N)  
Type of product : Solution

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

##### 1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use  
Use of the substance/mixture : Laboratory chemicals

##### 1.2.2. Uses advised against

No additional information available

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

ISOLAB Laborgeräte GmbH  
Am Dillhof 2 - 63863 Eschau / GERMANY

Tel: + 49 93 74 / 978 55-0

Fax: +49 93 74 / 978 55-29

[prodsafe@isolab.de](mailto:prodsafe@isolab.de)

#### 1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Remark
Germany	Giftnotruf der Charité CBF, Haus VIII (Wirtschaftsgebäude), UG	Hindenburgdamm 30 12203 Berlin	+49 30 19240	

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Corrosive to metals, Category 1 H290

Full text of H statements : see section 16

##### Adverse physicochemical, human health and environmental effects

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

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

Signal word (CLP) : Danger  
Hazard statements (CLP) : H290 - May be corrosive to metals.  
Precautionary statements (CLP) : P234 - Keep only in original container.  
P390 - Absorb spillage to prevent material damage  
P406 - Store in corrosive resistant container with a resistant inner liner.

#### 2.3. Other hazards

No additional information available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

#### 3.2. Mixtures

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## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 01/06/2022 Version: 1.0

Doc. No: SDS-932.13V/2



Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
hydrochloric acid ... % substance with a Community workplace exposure limit	(EC-No.) 231-595-7 (EC Index-No.) 017-002-01-X	< 1	Skin Corr. 1B, H314 STOT SE 3, H335

### Specific concentration limits:

Name	Product identifier	Specific concentration limits
hydrochloric acid ... %	(EC-No.) 231-595-7 (EC Index-No.) 017-002-01-X	( 10 =<C < 100) STOT SE 3, H335 ( 10 =<C < 25) Eye Irrit. 2, H319 ( 10 =<C < 25) Skin Irrit. 2, H315 ( 25 =<C < 100) Skin Corr. 1B, H314

Full text of H-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately. Get medical advice/attention if you feel unwell. IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Wash skin with plenty of water. Take off contaminated clothing. Take off immediately all contaminated clothing. Call a physician immediately. If skin irritation occurs: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

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

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear suitable protective clothing, gloves and eye or face protection.  
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment. Do not discharge into drains or waterways without neutralizing.

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

Methods for cleaning up : Take up liquid spill into absorbent material.  
Other information : Dispose of materials or solid residues at an authorized site.

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## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 01/06/2022 Version: 1.0

Doc. No: SDS-932.13V/2



### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool.
- Incompatible materials : Metals.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

hydrochloric acid ... %		
EU	Local name	Hydrogen chloride
EU	IOELV TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
EU	IOELV TWA (ppm)	5 ppm
EU	IOELV STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
EU	IOELV STEL (ppm)	10 ppm
EU	Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Germany	TRGS 900 Local name	Hydrogenchlorid
Germany	TRGS 900 Occupational exposure limit value (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Germany	TRGS 900 Occupational exposure limit value (ppm)	2 ppm
Germany	TRGS 900 Limitation of exposure peaks	2(l)
Germany	TRGS 900 Remark	DFG,EU,Y
Germany	TRGS 900 Regulatory reference	TRGS900
United Kingdom	Local name	Hydrogen chloride
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup> gas and aerosol mists
United Kingdom	WEL TWA (ppm)	1 ppm gas and aerosol mists
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup> gas and aerosol mists
United Kingdom	WEL STEL (ppm)	5 ppm gas and aerosol mists
Turkey	Local name	Hidrojen klorür
Turkey	OEL TWA (mg/m <sup>3</sup> )	8 mg/m <sup>3</sup>
Turkey	OEL TWA (ppm)	5 ppm
Turkey	OEL STEL (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>
Turkey	OEL STEL (ppm)	10 ppm
Turkey	Regulatory reference	12 Ağustos 2013 Tarihli ve 28733 Sayılı Resmî Gazete

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Personal protective equipment:

Gloves. Self-contained breathing apparatus.

#### Hand protection:

Protective gloves. Wear suitable gloves resistant to chemical penetration

#### Eye protection:

Safety glasses. Splash goggles. EN 166

#### Skin and body protection:

# HYDROCHLORIC ACID 0.1 MOL/L (0.1 N)

## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 01/06/2022 Version: 1.0

Doc. No: SDS-932.13V/2



Wear suitable protective clothing

### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Device	Filter type	Condition	Standard
Breathing apparatus with filter	Type E - Sulfur dioxide and hydrogen chloride (acidic gases)	Vapour protection	

### Personal protective equipment symbol(s):



### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid. Clear.
Colour	: colourless to slightly yellow.
Odour	: Pungent.
Odour threshold	: No data available
pH	: $\approx 1$
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

# HYDROCHLORIC ACID 0.1 MOL/L (0.1 N)

## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 01/06/2022 Version: 1.0

Doc. No: SDS-932.13V/2



### 10.5. Incompatible materials

metals. Bases. Strong bases.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: $\approx$ 1
Serious eye damage/irritation	: Causes serious eye damage. pH: $\approx$ 1
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

### 12.2. Persistence and degradability

<b>hydrochloric acid ... %</b>	
Persistence and degradability	Biodegradability: not applicable.

### 12.3. Bioaccumulative potential

<b>hydrochloric acid ... %</b>	
Bioaccumulative potential	Not bioaccumulative.

### 12.4. Mobility in soil

<b>hydrochloric acid ... %</b>	
Ecology - soil	No (test)data on mobility of the components available. May be harmful to plant growth, blooming and fruit formation.

### 12.5. Results of PBT and vPvB assessment

<b>Component</b>	
hydrochloric acid ... % ( )	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations. Prevent entry to sewers and public waters.
Ecology - waste materials	: Avoid release to the environment.
European List of Waste (LoW) code	: 06 01 02* - hydrochloric acid

# HYDROCHLORIC ACID 0.1 MOL/L (0.1 N)

## Safety Data Sheet

according to Regulation (EU) 2015/830






Date of issue: 01/06/2022 Version: 1.0

Doc. No: SDS-932.13V/2



### SECTION 14: Transport information

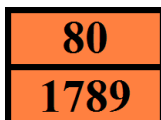
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1789	1789	1789	1789	1789
<b>14.2. UN proper shipping name</b>				
HYDROCHLORIC ACID	HYDROCHLORIC ACID	Hydrochloric acid	HYDROCHLORIC ACID	HYDROCHLORIC ACID
<b>Transport document description</b>				
UN 1789 HYDROCHLORIC ACID, 8, II, (E)	UN 1789 HYDROCHLORIC ACID, 8, II	UN 1789 Hydrochloric acid, 8, II	UN 1789 HYDROCHLORIC ACID, 8, II	UN 1789 HYDROCHLORIC ACID, 8, II
<b>14.3. Transport hazard class(es)</b>				
8	8	8	8	8
				
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR)	: C1
Special provisions (ADR)	: 520
Limited quantities (ADR)	: 11
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T8
Portable tank and bulk container special provisions (ADR)	: TP2
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 2R

#### - Transport by sea

Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
IBC special provisions (IMDG)	: B20
Tank instructions (IMDG)	: T8
Tank special provisions (IMDG)	: TP2
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: C

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## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 01/06/2022 Version: 1.0

Doc. No: SDS-932.13V/2



Properties and observations (IMDG) : Colourless liquid. An aqueous solution of the gas hydrogen chloride. Highly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

### - Air transport

PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y840  
PCA limited quantity max net quantity (IATA) : 0.5L  
PCA packing instructions (IATA) : 851  
PCA max net quantity (IATA) : 1L  
CAO packing instructions (IATA) : 855  
CAO max net quantity (IATA) : 30L  
Special provisions (IATA) : A3  
ERG code (IATA) : 8L

### - Inland waterway transport

Classification code (ADN) : C1  
Special provisions (ADN) : 520  
Limited quantities (ADN) : 1 L  
Excepted quantities (ADN) : E2  
Carriage permitted (ADN) : T  
Equipment required (ADN) : PP, EP  
Number of blue cones/lights (ADN) : 0

### - Rail transport

Classification code (RID) : C1  
Special provisions (RID) : 520  
Limited quantities (RID) : 1L  
Excepted quantities (RID) : E2  
Packing instructions (RID) : P001, IBC02  
Mixed packing provisions (RID) : MP15  
Portable tank and bulk container instructions (RID) : T8  
Portable tank and bulk container special provisions (RID) : TP2  
Tank codes for RID tanks (RID) : L4BN  
Transport category (RID) : 2  
Colis express (express parcels) (RID) : CE6  
Hazard identification number (RID) : 80

## 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions  
Contains no substance on the REACH candidate list  
Contains no REACH Annex XIV substances

#### 15.1.2. National regulations

##### Germany

Reference to AwSV : Water hazard class (WGK) nwg, Non-hazardous to water (Classification according to AwSV, Annex 1)  
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

# HYDROCHLORIC ACID 0.1 MOL/L (0.1 N)

## Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 01/06/2022 Version: 1.0

Doc. No: SDS-932.13V/2



### SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
Pow (log)	n-octanol/water partition coefficient
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

Data sources : Classification according to Regulation (EC) No. 1272/2008 [CLP]. Supplier's safety documents.  
Other information : **DISCLAIMER OF LIABILITY** The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
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.

SDS ISOLAB (EU)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*