

SAFETY DATA SHEET

According to 1907/2006/EC, Article 3

Version no. : 2.1
Prepared on : 02.03.2024
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SECTION 1: Identification of the substance/mixture and of the company/undertaking.

1.1 Product identifiers

Product name Hydrochloric acid
Product Number PSR39470 / PSR48076 / PSR49163
Brand PureSynth research chemicals
CAS No. 7647-01-0

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

Identified uses : PurTrace

1.3 Details of the supplier of the safety data sheet

Company PureSynth Research Chemicals GmbH.
64683 Einhausen Marie-Curie-Straße. 3, Germany

1.4 Emergency telephone number

Worldwide Helpline No.: 1800-8908-260

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Corrosive to Metals (Category 1), H290

Skin corrosion (Sub-category 1B), H314

Serious eye damage (Category 1), H318

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

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)

P234 Keep only in original packaging

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/ protective clothing/ eye protection/ face Protection/ hearing protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated Clothing. Rinse skin with water Clothing. Rinse skin with water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing.
Supplemental Hazard Statements	None

2.3 Other hazards:

This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher

SECTION 3: Composition / information on ingredients

3.1 Substances

Common names & Synonyms	Mol. formula	CAS number
-	HCl	7647-01-0
Component	Classification	Concentration
Hydrochloric Acid	Met. Corr. 1; Skin Corr. 1B; Eye Dam. 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;	>= 30 - < 50 %

SECTION 4: First aid measures

Description of first aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in Attendance.
If inhaled	After inhalation: fresh air. Call in physician.
In case of skin contact	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
In case of eye contact	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
If swallowed	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralize.
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

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

Extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Suitable extinguishing media	
Special hazards arising from the substance or mixture	Hydrogen chloride gas Not combustible. Ambient fire may liberate hazardous vapors.
Advice for fire-fighters	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
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.

SECTION 6: Accidental release measures

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, and consult an expert. For personal protection see section 8.
Environmental precautions	Do not let product enter drains. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Cover drains. Collect, bind, and pump off spills.
Methods and materials for containment and cleaning up	Observe possible material restrictions (see sections 7 and 10). Take up with liquid absorbent material. Dispose of properly. Clean up affected area.
Reference to other sections	For disposal see section 13.

SECTION 7: Handling and storage

Precautions for safe handling	For precautions see section 2.2.
Conditions for safe storage, including any incompatibilities	No metal containers. Tightly closed
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

Control parameters	No data available
Exposure controls	
Appropriate engineering controls	No data available
Personal protective equipment:	

Eye / face protection	Face shield and safety glasses Use equipment for eye protection tested And approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting Safety glasses. 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
Skin protection	The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
Body Protection	protective clothing Required when vapors/aerosols are generated.
Respiratory protection	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. Recommended Filter type: Filter type ABEK The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.
Control of environmental exposure	Do not let product enter drains.

SECTION 9: Physical and chemical properties

Appearance	Form: Liquid
Odor	Color: Light-yellow pungent
pH - Value	No data available
Density	No data available
Boiling Point	> 100 °C
Melting Point	-30 °C
Solubility in water	soluble
Flash point	No data available
Vapor pressure	226.636 hPa at 21.1 °C 546.596 hPa at 37.7 °C
Auto -ignition temperature	No data available
Vapor density	No data available
Flammability (solid, gas)	No data available
Evaporation rate	No data available
Partition coefficient: n- octanol / water	No data available
Viscosity	Viscosity, dynamic: 2.3 mPa.s at 15 °C
Explosive properties	No data available
Upper / lower flammability or explosive limits	No data available
Oxidizing properties	No data available

Other safety information: No data available

SECTION 10: Stability and reactivity

Reactivity	No data available
Chemical stability	The product is chemically stable under standard ambient conditions (Room temperature).
Possibility of hazardous reactions	No data available
Condition to avoid	No data available
Incompatible materials	Bases, Amines, Alkali metals, Metals, permanganates, for example potassium permanganate, Fluorine, metal acetylides, hexalithium disilicide Metals
Hazardous decomposition products	In the event of fire: see section 5

SECTION 11: Toxicological information

Acute toxicity	Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach. Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
Skin corrosion/irritation	Mixture causes burns.
Serious eye damage/eye irritation	Mixture causes serious eye damage. Risk of blindness!
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	Mixture may cause respiratory irritation.
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available RTECS: MW4025000
Additional Information	Other dangerous properties cannot be excluded. Handle in accordance with good industrial hygiene and safety practice.
Components: Hydrochloric Acid	Inhalation: Cough Difficulty in breathing Inhalation: absorption
Acute toxicity	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 Skin - reconstructed human epidermis (RhE)
Skin corrosion/irritation	Result: Corrosive (OECD Test Guideline 431)
Serious eye damage/eye irritation	Eyes - Bovine cornea Result: Corrosive (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: Conflicting results have been seen in different studies.
Carcinogenicity	Carcinogenicity - Did not show carcinogenic effects in animal experiments. (IUCLID)
Specific target organ toxicity - single exposure	May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

The substance or mixture is classified as specific target organ toxicant, Single exposure, category 3 with respiratory tract irritation. 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
The substance or mixture is not classified as specific target organ toxicant, repeated exposure

SECTION 12: Ecological information

Toxicity

Persistence and degradability No data available

Biodegradability No data available

Bio accumulative potential No data available

Mobility in soil No data available

Results of PBT and vPvB assessment This substance/mixture contains no components considered to be either persistent, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at Levels of 0.1% or higher.

Other adverse effects No data available.

Components : Hydrochloric Acid

Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 282 mg/l - 96 h
Remarks: (IUCLID)

SECTION 13: Disposal considerations

Waste treatment methods Offer surplus and non-recyclable solutions to a licensed disposal company. Waste
Products Material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleansed containers like the product itself.

Contaminated packaging Dispose of as unused product.

SECTION 14: Transport information

	UN no.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR / RID	1789	HYDROCHLORIC ACID	8	II	No
IMDG	1789	HYDROCHLORIC ACID	8	II	No
IATA	1789	Hydrochloric acid	8	II	No

SECTION 15: Regulatory information

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

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

The information in this SDS 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. The user must be determined suitability of this information for his application.