

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended



Hydrochloric acid 35-38%

Creation date 01st July 2020
Revision date Version 1.0

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

- 1.1. Product identifier**
Substance / mixture Hydrochloric acid 35-38%
Number substance
017-002-01-X
Chemical name hydrogen chloride
CAS number 7647-01-0
Index number 017-002-00-2
EC (EINECS) number 231-595-7
Registration number 01-2119484862-27-XXXX
- 1.2. Relevant identified uses of the substance or mixture and uses advised against**
Substance's intended use Laboratory chemicals, Manufacture of substances
Substance uses advised against The product should not be used in ways other than those referred in Section 1.
- 1.3. Details of the supplier of the safety data sheet**
Supplier
Name or trade name Protolab Stanisław Staniuk
Address Owocowa 4-8, Słupsk, 76-200
Poland
Phone +48 794 341 322
E-mail protolab@protolab.pl
Competent person responsible for the safety data sheet
Name Protolab Stanisław Staniuk
E-mail protolab@protolab.pl
- 1.4. Emergency telephone number**
112

SECTION 2: Hazards identification

- 2.1. Classification of the substance or mixture**
Classification of the substance in accordance with Regulation (EC) No 1272/2008

The substance is classified as dangerous.

Met. Corr. 1, H290
Skin Corr. 1B, H314
STOT SE 3, H335

Full text of all classifications and hazard statements is given in the section 16.

Most serious adverse effects on human health and the environment

Causes severe skin burns and eye damage. May cause respiratory irritation.

- 2.2. Label elements**
Hazard pictogram



Signal word
Danger

Dangerous substance
hydrogen chloride
(Index: 017-002-00-2; CAS: 7647-01-0)

SAFETY DATA SHEET

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Hydrochloric acid 35-38%

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Hazard statements

H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated 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. Immediately call a POISON CENTER/doctor.

Requirements for child-resistant fastenings and tactile warning of danger

Container must carry a tactile warning of danger. Container must be fitted with child-resistant fastening.

2.3. Other hazards

Substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical characterization

The substance specified below.

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
Index: 017-002-00-2 CAS: 7647-01-0 EC: 231-595-7 Registration number: 01-2119484862-27-XXXX	substance main component hydrogen chloride	35-38	Met. Corr. 1, H290 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335	1

Notes

1 Substance for which exposure limits of Community for working environment exist.

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet. If unconscious, put the person in the stabilized (recovery) position on his side with his head slightly bent backwards and make sure that airways are free; never induce vomiting. If the person vomits by himself, make sure that the vomit is not inhaled. In life threatening conditions first of all provide resuscitation of the affected person and ensure medical assistance. Respiratory arrest - provide artificial respiration immediately. Cardiac arrest - provide indirect cardiac massage immediately.

If inhaled

Take care of your own safety, do not let the affected person walk! Terminate the exposure immediately; move the affected person to fresh air. Beware of the contaminated clothes. Depending on the situation, call the medical rescue service and ensure medical treatment considering the frequent need of further observation for at least 24 hours.

If on skin

Remove contaminated clothes. Take off any rings, watches, bracelets before or during washing if worn in the contaminated areas of the skin. Depending on the situation, call the medical rescue service and always ensure medical treatment. Rinse contaminated areas with a flow of water, lukewarm at best, for 10-30 minutes; do not use any brush, soap or neutralizers. Rinse skin with water or shower. Rinse cautiously with water for several minutes.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case! Rinsing should be continued for 10-30 minutes from the inner to the outer eye corner to make sure that the other eye is not involved. Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible. Everyone must be referred for treatment even if affected only a little.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended



Protolab
Tworzymy unikalne rozwiązania

Hydrochloric acid 35-38%

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Revision date

Version

1.0

If swallowed

DO NOT INDUCE VOMITING - there is danger of further damage to the gastrointestinal tract!!! Danger of esophageal and gastric perforation! RINSE THE MOUTH WITH WATER IMMEDIATELY AND LET THE PERSON DRINK 2-5 dl of cold water to reduce the heating effect of the corrosive substance. Consuming larger amounts of liquid is not advisable as it may induce vomiting and potential inhaling of the corrosive substances in the lungs. The affected person must not be forced to drink, particularly if already feeling pain in the mouth or throat. In this case let the affected person only rinse the mouth with water. DO NOT PROVIDE ACTIVATED CARBON! Depending on the situation, call medical rescue service or ensure medical treatment as promptly as possible.

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

If inhaled

Inhaling vapours can cause corrosion of the breathing system. May cause respiratory irritation.

If on skin

Causes severe skin burns.

If in eyes

Causes serious eye damage.

If swallowed

Corrosion of the digestion system can occur.

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

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

In the event of fire, carbon monoxide, carbon dioxide and other toxic gases may arise. Inhalation of hazardous degradation (pyrolysis) products may cause serious health damage. Hydrogen chloride gas.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely. Use a self-contained breathing apparatus and full-body protective clothing. Do not allow run-off of contaminated fire extinguishing material to enter drains or surface and ground water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment for work. Follow the instructions in the Sections 7 and 8. Do not inhale aerosols. Prevent contact with skin and eyes.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water.

6.3. Methods and material for containment and cleaning up

Spilled product should be covered with suitable (non-flammable) absorbing material (sand, diatomaceous earth, earth and other suitable absorption materials); to be contained in well closed containers and removed as per the Section 13. In the event of leakage of the substantial amount of the product, inform fire brigade and other competent bodies. After removal of the product, wash the contaminated site with plenty of water. Do not use solvents.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended



Hydrochloric acid 35-38%

Creation date 01st July 2020
Revision date Version 1.0

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent formation of gases and vapours in concentrations exceeding the occupational exposure limits. Do not inhale aerosols. Prevent contact with skin and eyes. Wash hands and exposed parts of the body thoroughly after handling. Use only outdoors or in a well-ventilated area. Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection.

7.2. Conditions for safe storage, including any incompatibilities

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. Store in cool place

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Follow the usual measures intended for health protection at work and especially for good ventilation. This can be achieved only by local suction or efficient general ventilation. If exposure limits cannot be observed in this mode, suitable protection of airways must be used. Do not eat, drink and smoke during work. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest.

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 Regulation (EU) 2016/425 and the standard EN 374 derived from it.

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).

Thermal hazard

Data not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Physical state	liquid at 20°C
color	colourless
Odour	pungent
Odour threshold	data not available
pH	data not available
Melting point/freezing point	-30 °C
Initial boiling point and boiling range	>100 °C
Flash point	data not available
Evaporation rate	data not available
Flammability (solid, gas)	data not available
Upper/lower flammability or explosive limits	
flammability limits	data not available
explosive limits	data not available
Vapour pressure	169.991 mmHg at 21.1°C
Vapour density	data not available
Relative density	data not available

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended



Hydrochloric acid 35-38%

Creation date	01st July 2020	Version	1.0
Revision date			

Solubility(ies)	
solubility in water	soluble
solubility in fats	data not available
Partition coefficient: n-octanol/water	data not available
Auto-ignition temperature	data not available
Decomposition temperature	data not available
Viscosity	data not available
Explosive properties	data not available
Oxidising properties	data not available

9.2. Other information

Density	1.18 g/cm ³ at 25°C
ignition temperature	data not available

SECTION 10: Stability and reactivity

10.1. Reactivity

The substance is non-flammable.

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Protect against flames, sparks, overheating and against frost.

10.5. Incompatible materials

Bases, Amines, Alkali metals, Metals, permanganates, for example potassium permanganate, Fluorine, metal acetylides, hexalithium disilicide

10.6. Hazardous decomposition products

Hazardous decomposition products formed under fire conditions.-Hydrogen chloride gas

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Inhalation of solvent vapors above values exceeding exposure limits for working environment may result in acute inhalation poisoning, depending on the level of concentration and exposure time. No toxicological data is available for the substance.

Acute toxicity

Based on available data the classification criteria are not met.

Hydrochloric acid 35-38%

Route of exposure	Parameter	Value	Time of exposure	Species	Sex	Source
Inhalation	LCLo	1970 mg/m ³	30 min	Human		RTECS
Inhalation (gases)	LC ₅₀	4701 ppm	30 min	Rat (Rattus norvegicus)		
Inhalation (gases)	LC ₅₀	40989 ppm	5 min	Rat (Rattus norvegicus)		gazowy HCl
Inhalation (aerosols)	LC ₅₀	8.3 mg/l	30 min	Rat (Rattus norvegicus)		
Inhalation (aerosols)	LC ₅₀	45.6 mg/l	5 min	Rat (Rattus norvegicus)		

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended



Hydrochloric acid 35-38%

Creation date

01st July 2020

Revision date

Version

1.0

Skin corrosion/irritation

Causes severe skin burns and eye damage.

Hydrochloric acid 35-38%

Route of exposure	Result	Method	Time of exposure	Species
Skin	Corrosive	OECD 431		Human

Serious eye damage/irritation

Causes severe skin burns and eye damage.

Hydrochloric acid 35-38%

Route of exposure	Result	Method	Time of exposure	Species
Eye	Corrosive	OECD 437		

Respiratory or skin sensitisation

Based on available data the classification criteria are not met.

Hydrochloric acid 35-38%

Route of exposure	Result	Method	Time of exposure	Species	Sex
	Negative	OECD 406		Guinea-pig (Cavia aperea f. porcellus)	

Germ cell mutagenicity

Based on available data the classification criteria are not met.

Hydrochloric acid 35-38%

Result	Method	Time of exposure	Specific target organ	Species	Sex
Not specified	in vitro		Ovary	Chinese hamster (Cricetulus barabensis)	

Carcinogenicity

Carcinogenicity-Did not show carcinogenic effects in animal experiments. (IUCRID)

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

Based on available data the classification criteria are not met.

Toxicity for specific target organ - single exposure

May cause respiratory irritation.(Hydrochloric Acid)

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

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(Hydrochloric Acid)

Toxicity for specific target organ - repeated exposure

Based on available data the classification criteria are not met.

Aspiration hazard

Based on available data the classification criteria are not met.

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended



Hydrochloric acid 35-38%

Creation date 01st July 2020
Revision date Version 1.0

SECTION 12: Ecological information

12.1. Toxicity

Acute toxicity

Hydrochloric acid 35-38%

Parameter	Value	Time of exposure	Species	Environment
LC ₅₀	282 mg/l	96 hour	Fishes (Gambusia affinis)	

12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3. Bioaccumulative potential

Data not available.

12.4. Mobility in soil

Data not available.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Other adverse effects

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

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

SECTION 14: Transport information

14.1. UN number

UN 1789

14.2. UN proper shipping name

HYDROCHLORIC ACID

14.3. Transport hazard class(es)

8 Corrosive substances

14.4. Packing group

II - substances presenting medium danger

14.5. Environmental hazards

ADR/RID: no

IMDG Mairine pollutant: no

IATA: no

14.6. Special precautions for user

Reference in the Sections 4 to 8.

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

not available

SAFETY DATA SHEET

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Hydrochloric acid 35-38%

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Additional information

Hazard identification No.

80

UN number

1789

Classification code

C1

Safety signs

8



Air transport - ICAO/IATA

Packaging instructions passenger

851

Cargo packaging instructions

855

Marine transport - IMDG

EmS (emergency plan)

F-A, S-B

Marine Pollutant

No

SECTION 15: Regulatory information

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

Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. Regulation (EC) No. 1272/2008 of the European Parliament and of the Council of 16th December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006, as amended.

15.2. Chemical safety assessment

not available

SECTION 16: Other information

A list of standard risk phrases used in the safety data sheet

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H335 May cause respiratory irritation.

Guidelines for safe handling used in the safety data sheet

P280 Wear protective gloves/protective clothing/eye protection.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

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/doctor.

Other important information about human health protection

The product must not be - unless specifically approved by the manufacturer/importer - used for purposes other than as per the Section 1. The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR European agreement concerning the international carriage of dangerous goods by road

BCF Bioconcentration Factor

CAS Chemical Abstracts Service

CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures

DNEL Derived no-effect level

EC Identification code for each substance listed in EINECS

EC₅₀ Concentration of a substance when it is affected 50% of the population

EINECS European Inventory of Existing Commercial Chemical Substances

SAFETY DATA SHEET

according to Regulation (EC) No 1907/2006 (REACH) as amended



Hydrochloric acid 35-38%

Creation date	01st July 2020	Version	1.0
Revision date			

EmS	Emergency plan
EU	European Union
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
IC ₅₀	Concentration causing 50% blockade
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LC ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEC	Lowest observed adverse effect concentration
LOAEL	Lowest observed adverse effect level
log K _{ow}	Octanol-water partition coefficient
MARPOL	International Convention for the Prevention of Pollution From Ships
NOAEC	No observed adverse effect concentration
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
NOEL	No observed effect level
OEL	Occupational Exposure Limits
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted no-effect concentration
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bioaccumulative
Eye Dam.	Serious eye damage
Met. Corr.	Corrosive to metals
Skin Corr.	Skin corrosion
STOT SE	Specific target organ toxicity - single exposure

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended.
REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.