Hydrochloric acid 37% a.r.

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 8/30/2023 Version: 1.0

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Hydrochloric acid 37% a.r.
EC Index-No.	:	017-002-01-X
EC-No.	:	231-595-7
CAS-No.	:	7647-01-0
REACH registration No.	:	01-2119484862-27
Product code	:	CL00.0310
Type of product	:	Solution
Formula	:	HCl
Synonyms	:	hydrochloric acid, conc=37%, aqueous solution / hydrochloric-acid-
BIG No	:	29443

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemical

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Chem-Lab nv
Industriezone 'De arend 2'
Zedelgem – Belgium
Belgium
T +32 50 288320
info@chem-lab.be - https://www.chem-lab.be

1.4. Emergency telephone number

Emergency number : +32 50 28 83 20

Country	Organisation/Company	Address	Emergency number	Comment
Belgium	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Militaire Reine Astrid	Rue Bruyn 1 1120 Brussels	+32 70 245 245	Please dial: 070 245 245 for any urgent questions about intoxication (free of charge 24/7), if not accessible, dial: 02 264 96 30 (standard fee)

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
Skin corrosion/irritation, Category 1, Sub-Category 1B	H314
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS05 GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) : H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) : P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 - IF exposed or concerned: Call a POISON CENTER or doctor.

2.3. Other hazards

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

This mixture does not contain any substances to be mentioned according to the criteria of section 3.2 of REACH Annex II

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Wash immediately with PE-glycol 400. Remove clothing while washing. Do not remove clothing if it sticks to the skin. Cover wounds with sterile bandage. Consult a doctor/medical service. If burned surface > 10%: take victim to hospital.

First-aid measures after eye contact : Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice.

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Do not induce vomiting. Immediately consult a doctor/medical service. Call Poison Information Centre (www.big.be/antigif.html). Take the container/vomit to the doctor/hospital. Do not give chemical antidote. Ingestion of large quantities: immediately to hospital.

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

Symptoms/effects after inhalation	:	Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes. EXPOSURE TO HIGH CONCENTRATIONS: Respiratory difficulties. Possible laryngeal spasm/oedema. Corrosion of the upper respiratory tract. FOLLOWING SYMPTOMS MAY APPEAR LATER: Risk of pneumonia. Risk of lung oedema.
Symptoms/effects after skin contact	:	Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact	:	Corrosion of the eye tissue. Permanent eye damage.
Symptoms/effects after ingestion	:	Burns to the gastric/intestinal mucosa. Blood in vomit. Possible esophageal perforation. Shock.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Adapt extinguishing media to the environment for surrounding fires.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	:	INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".

5.3. Advice for firefighters

Precautionary measures fire	:	Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	:	Dilute toxic gases with water spray. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.
Protection during firefighting	:	Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	Gloves (EN 374). Face shield (EN 166). Corrosion-proof suit (EN 14605). Large spills/in enclosed spaces: self-contained breathing apparatus (EN 136 + EN 137). Large spills/in enclosed spaces: gas-tight suit (EN 943). Reactivity hazard: self-contained breathing apparatus (EN 136 + EN 137). Reactivity hazard: gas-tight suit (EN 943).
Emergency procedures	:	Mark the danger area. No naked flames. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation. Large spills/in confined spaces: consider evacuation. Wash contaminated clothes.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Hazardous reaction: measure explosive gas-air mixture. If reacting: dilute combustible/toxic gases/vapours. Take account of toxic/corrosive precipitation water. Heat exposure: dilute toxic gas/vapour with water spray.

Methods for cleaning up	:	Liquid spill: neutralize with soda (sodium carbonate). Neutralized substance: take up in absorbent material. Scoop absorbed substance into closing containers. Damaged/cooled tanks must be emptied. Carefully collect the spill/leftovers. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.
Hygiene measures	:	Observe strict hygiene.

7.2. Conditions for safe storage, including any incompatibilities

Storage temperature	:	2 – 25 °C
Heat and ignition sources	:	KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	:	KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) bases. metals. amines.
Storage area	:	Ventilation at floor level. Keep locked up. Provide for a tub to collect spills. Meet the legal requirements.
Special rules on packaging	:	SPECIAL REQUIREMENTS: closing. corrosion-proof. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	:	MATERIAL TO AVOID: steel. metal.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

Hydrochloric acid 37% a.r. (7647-01-0)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	15 mg/m³
Long-term - local effects, inhalation	8 mg/m³

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Face shield (EN 166)

8.2.2.2. Skin protection

Skin and body protection:
Corrosion-proof clothing (EN 14605)

Hand protection:
Gloves

Other skin protection

Materials for protective clothing:
Good resistance: Natural rubber. Nitrile rubber

8.2.2.3. Respiratory protection

Respiratory protection:
Full face mask with filter type B. Full face mask with filter type E. High vapour/gas concentration: self-contained breathing apparatus (EN 136 + EN 137)

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colourless.
Appearance	:	Liquid.
Molecular mass	:	36.46 g/mol
Odour	:	Irritating/pungent odour.
Odour threshold	:	Not available
Melting point	:	-25 °C
Freezing point	:	-30 °C
Boiling point	:	Not available
Flammability	:	Not available
Explosive limits	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not applicable
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not available
pH	:	< 1
Viscosity, kinematic	:	1.933 mm²/s
Viscosity, dynamic	:	2.3 mPa·s (15 °C)

Solubility	:	Soluble in water. Water: complete
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Partition coefficient n-octanol/water (Log Pow)	:	0.25 (QSAR)
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	1.19 g/ml
Relative density	:	1.2
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Minimum ignition energy	:	Not applicable
VOC content	:	0 %
Other properties	:	Gas/vapour heavier than air at 20°C,Producing fumes/mist,Acid reaction

SECTION 10: Stability and reactivity

10.1. Reactivity

On exposure to air: release of corrosive mist. Reacts violently with (some) bases. Reacts exothermically with many compounds.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Reacts with (strong) oxidizers: release of (highly) toxic gases/vapours (chlorine). Reacts with (some) metals: release of highly flammable gases/vapours (hydrogen). Decomposes on exposure to temperature rise: release of (highly) toxic gases/vapours (chlorine).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified
Skin corrosion/irritation	:	Causes severe skin burns. pH: < 1
Serious eye damage/irritation	:	Assumed to cause serious eye damage pH: < 1
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
STOT-single exposure	:	May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

Hydrochloric acid 37% a.r. (7647-01-0)	
Viscosity, kinematic	1.933 mm²/s

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms : Causes severe skin burns,May cause respiratory irritation,Causes serious eye damage.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air : None of the known components is included in the list of substances which may contribute to the greenhouse effect (IPCC). None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water : Slightly harmful to fishes. Groundwater pollutant. Mild water pollutant (surface water). pH shift. Toxic to plankton.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Not classified
Not rapidly degradable

Hydrochloric acid 37% a.r. (7647-01-0)	
LC50 - Fish [1]	282 mg/l (96 h, Gambusia affinis, Pure substance)
EC50 - Crustacea [1]	< 56 mg/l (72 h, Daphnia magna, Pure substance)

12.2. Persistence and degradability

Hydrochloric acid 37% a.r. (7647-01-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Hydrochloric acid 37% a.r. (7647-01-0)	
Partition coefficient n-octanol/water (Log Pow)	0.25 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

Hydrochloric acid 37% a.r. (7647-01-0)	
Ecology - soil	No (test)data on mobility of the component(s) available. May be harmful to plant growth, blooming and fruit formation.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Treat using the best available techniques before discharge into drains or the aquatic environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized dump (Class I). Dehydrate/make insoluble. Immobilize the toxic or harmful components.

Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

SECTION 14: Transport information

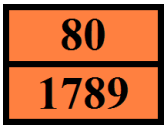
In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1789	UN 1789	UN 1789	UN 1789	UN 1789
14.2. UN proper shipping name				
hydrochloric acid	hydrochloric acid	hydrochloric acid	hydrochloric acid	hydrochloric acid
Transport document description				
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
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
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

Transport regulations (ADR) : Subject to the provisions
Classification code (ADR) : C1
Hazard identification number (Kemler No.) : 80
Orange plates :



Tunnel restriction code (ADR) : E

Transport by sea

Transport regulations (IMDG) : Subject to the provisions
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B

Air transport

Transport regulations (IATA) : Subject to the provisions

Inland waterway transport

Classification code (ADN) : C1
Carriage permitted (ADN) : T

Rail transport

Transport regulations (RID) : Subject to the provisions
Classification code (RID) : C1

14.7. Maritime transport in bulk according to IMO instruments

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

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

VOC Directive (2004/42)

VOC content : 0 %

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Hydrochloric acid 37% a.r.	Hydrogen chloride	7647-01-0	2806 10 00	Category 3		Annex I

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Safety Data Sheet (SDS), 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.