Safety Data Sheet

#90037752 · Full 16-section SDS

According to Regulation (EC) No 1907/2006
According to Regulation (EC) No 2020/878

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PRODUCT	CAS NUMBER	FORMULA	VERSION	REVISION DATE
Hydrochloric acid conc. ~37%	**7647-01-0**	**HCl**	**—**	**20 Feb 2026**

SECTION 1

Identification

Product name	Hydrochloric acid 36% (12M)
CAS number	7647-01-0
Chemical formula	HCl
Molecular weight	36.46
SMILES	Cl
EC / EINECS number	231-595-7
Recommended use & restrictions	For research and development. Laboratory chemicals. Manufacture of substances. Not suitable for human or veterinary purposes.
Emergency telephone	**0344 892 0111** — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

SECTION 2

Hazard identification

DANGER

CODE	HAZARD STATEMENT
H290	May be corrosive to metals
H314 (sub cat. 1B)	Causes severe skin burns and eye damage
H335	May cause respiratory irritation

CODE	PRECAUTIONARY STATEMENT
P260	Do not breathe dust/fume/gas/mist/vapours/spray
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P303+361	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse with water/shower
P305+351+338	IF IN EYES: Rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

Other hazards (e.g. PBT / vPvB, not classified)	Does not meet PBT or vPvB criteria under REACH Annex XIII. Does not contain components considered to have endocrine-disrupting properties

SECTION 3

Composition / information on ingredients

Purity / concentration	Hydrochloric acid (CAS: 7647-01-0, EC: 231-595-7): 30-40% [H290, H314 1B, H318, H335] Distilled water (CAS: 7732-18-5, EC: 686-299-4): 60-70% [-]
Impurities / stabilising additives	*Not applicable*

SECTION 4

First-aid measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. n case of persistent throat irritation or coughing: seek medical attention. Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Contact a physician if discomfort continues.
Eye contact	Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.
Ingestion	IF SWALLOWED: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only if the persons are fully conscious and awake). Administer activated charcoal (20 - 40g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.
Symptoms / effects & medical attention	he severity of the symptoms described will vary dependant of the concentration and the length of exposure. Causes burns by all exposure routes. See section 11 for more detailed information on health effects and symptoms.

SECTION 5

Fire-fighting measures

Suitable extinguishing media	Use measures appropriate to local circumstances
Unsuitable extinguishing media	None known
Special hazards	Specific hazards: Corrosive. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Hydrogen Chloride gas Not combustible. Ambient fire may liberate hazardous vapours
Advice for firefighters	Evacuate area. Avoid breathing gas, fume, vapours or spray. Prevent skin contact by maintaining a safe distance and by wearing suitable protective equipment/ clothing. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

SECTION 6

Accidental release measures

Personal precautions & PPE	Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. For personal protection, see section 8.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Containment & clean-up methods	Absorb spillage with a suitable absorbent material.

For specific precautions, see Section 8 and Section 13.

SECTION 7

Handling & storage

Storage temperature	Ambient
Precautions for safe handling	Work under hood. Take action to prevent static discharges. Wear protective clothing, gloves, eye and face protection. Avoid contact with skin and eyes. Avoid ingestion and inhalation. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product
Conditions for safe storage (incompatibilities)	No metal containers. Store at ambient temperature. Store in a dry place. Store in a closed container.

SECTION 8

Exposure controls / personal protection

Occupational exposure limits (OEL / WEL)	*Not applicable*
DNEC/PNEC data	*Not applicable*
Eye / face protection	Chemical splash goggles Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.
Skin / hand protection	Recommended gloves: Nitrile rubber, 0.4mm (480mins).
Respiratory protection	Self-contained breathing apparatus Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387.

SECTION 9

Physical & chemical properties

Density (g/mL)	1.186 g/mL DERIVED FROM: LITERATURE
Flash point	*Not applicable*
Acidity	Acid DERIVED FROM: LITERATURE
Appearance / physical state	Liquid DERIVED FROM: LITERATURE
Colour	Clear, yellowish liquid. DERIVED FROM: LITERATURE
Odour	Pungent DERIVED FROM: LITERATURE
Melting / freezing point	-30°C DERIVED FROM: LITERATURE
Boiling point	> DERIVED FROM: LITERATURE
Solubility (water)	*Not applicable*
pH	<1.0 DERIVED FROM: LITERATURE
Vapour pressure	227 hPa DERIVED FROM: LITERATURE
Partition coefficient (log Pow)	*Not applicable*
Auto-ignition / decomposition temp	*Not applicable*

SECTION 10

Stability & reactivity

Chemical stability / reactivity	Corrosive in contact with metals. Stable under the prescribed storage conditions
Conditions to avoid	Exothermic reaction with: Amines Potassium permanganate Salts of oxyhalogenic acids Semi-metallic oxides Semi-metallic hydrogen compounds Aldehydes Vinylmethyl ether. Risk of explosion with: Alkali metals Sulphuric acid Gives off hydrogen by reaction with metals. Risk of ignition or formation of inflammable gases or vapours with: Aluminum Carbides Fluorine Metals Bases Sulfides
Incompatible materials	Metals.
Hazardous decomposition products	See section 5

SECTION 11

Toxicological information

Acute toxicity (LD50 / LC50)	Hydrochloric Acid Inhalation: Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach
Skin corrosion / irritation	Hydrochloric Acid Reconstructed human epidermis (RhE)- Result: Corrosive
Eye corrosion / irritation	Hydrochloric Acid Bovine cornea- Result: Causes serious eye damage (10mins).
Respiratory / skin sensitisation	Hydrochloric Acid Maximisation test: Guinea pig- Result: Negative.
Carcinogenicity	Hydrochloric Acid Chromosome aberration test in vitro: Chinese Hamster ovary cells- Results: Positive results in some in vitro tests Mitotic recombination assay: Saccharomyces cerevisiae - Results: Negative. Ames test: Mouse lymphoma cells- Results: Positive.
Mutagenicity	*Not applicable*
Reproductive toxicity	*Not applicable*
STOT (single / repeated exposure)	Hydrochloric Acid May cause respiratory irritation.
Aspiration hazard	Based on available data, the classification criteria are not met
Endocrine disruptors	Not an endocrine disruptor.

SECTION 12

Ecological information

Aquatic toxicity	Hydrochloric Acid LC50: Gambusia affinis (Mosquito fish) - 282 mg/l (96hours)
Persistence & degradability	*No data available*
Bioaccumulative potential	*No data available*
Mobility in soil	*No data available*
PBT / vPvB assessment	*No data available*

SECTION 13

Disposal considerations

Waste treatment / disposal methods	Dispose of in accordance with local/national regulations

SECTION 14

Transport information

UN number	UN1789
Proper shipping name	HYDROCHLORIC ACID
Class	8
Packing group	II
Transport category	2
Tunnel code	(E)
Packing instruction (ADR)	P001
Packing instruction (IMDG)	P001
Environmental hazards	Not classified as environmentally hazardous for transport
Special precautions for user	None

SECTION 15

Regulatory information

REACH code	Y110
UFI code	*Not applicable*
ECHA notification	*Not applicable*
Chemical safety assessment carried out?	No

SECTION 16

Other information

Revision notes / other information	Previous SDS ver. 2 published 12th July 2024 Hazard classification and labelling according to Regulation (EC) 1272/2008 All eye/face protection should comply with EN ISO 16321-1:2022 Respiratory equipment: Reusable air-purifying respirator (APR) Filter Type: ABEK Standard: EN 14387 National Regulations: -Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances Other regulations, limitations and legal regulations: -Directive 94/33/EC- The protection of young people at work

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