

TECHNICAL DATA SHEET

Hydrochloric acid 25% - 36%

COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients: HYDROCHLORIC ACID...% 25-36%

EINECS: 231-595-7

[C] R34; [Xi] R37

HAZARD IDENTIFICATION

Main hazards: Causes burns. Irritating to respiratory system.

FIRST AID MEASURES (SYMPTOMS)

Skin contact: Irritation or pain may occur at the site of contact. There may be redness or whiteness of the skin in the area of exposure. Blistering may occur. Severe burns may occur.

Eye contact: There may be irritation and pain. The eyes may water profusely. Corneal burns may occur. May cause permanent damage.

Ingestion: Can cause immediate corrosion and damage to the gastrointestinal tract.

Inhalation: There may be a feeling of tightness in the chest with shortness of breath. Exposure may cause coughing or wheezing. There may be congestion of the lungs causing severe shortness of breath. There may be loss of consciousness.

FIRST AID MEASURES (ACTION)

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

FIRE-FIGHTING MEASURES

Extinguishing media: Suitable extinguishing media for surrounding fire be used.

Exposure hazards: Corrosive. Causes severe damage to eyes, skin and air passages. Attacks many metals with the liberation of hydrogen gas, which is flammable and forms explosive mixtures with air. Heating will cause pressure rise with risk of bursting. Toxic fumes of chlorine gas are likely to be produced.

Protection of fire-fighters: Wear self-contaminated breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

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ACCIDENTAL RELEASE MEASURES

Personal precautions: Evacuate the area immediately. Do not attempt to take action without suitable protective clothing – see section 8 of SDS.

For large spillages over 1000l call the emergency services.

Environmental precautions: Do not allow material to enter surface drains or water courses. If this occurs, inform the relevant water authority at once.

Clean-up procedures: Small spillages should be neutralized and absorbed with soda ash. Large spillages should be contained with sand or earth and neutralised (preferably with soda ash).

HANDLING AND STORAGE

Handling requirements: Ensure there is sufficient ventilation of the area. Avoid direct contact with the substance. Avoid breathing vapours.

Storage conditions: Store in cool, well ventilated area. Bulk quantities should be stored in rubber-lined steel or suitable plastic equipment. Keep smaller quantities in suitable plastic or glass containers. Avoid incompatible materials – see section 10 of SDS.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace exposure limits.

WEL (8 hr exposure limit): 1ppm (2mg/m³)

WEL (15 min exposure limit): 5ppm (8mg/m³)

Hazardous ingredients: HYDROCHLORIC ACID ...% WEL (15 min exposure limit): 7.6 mg/m³

Engineering measures: Ensure there is sufficient ventilation of the area. Atmospheric concentrations should be minimised and kept as low as reasonably practicable below the occupational exposure limit.

Respiratory protection: Suitable respiratory protective device. Cartridge/Canister type E (CEN 141).

Hand protection: Protective gloves.

Eye protection: Safety goggles. Face-shields. Ensure eye bath is to hand.

Skin protection: Wear protective clothing. Boots made of PVC. Ensure safety shower is to hand.

PHYSICAL AND CHEMICAL PROPERTIES

State: Fuming Liquid

Colour: Colourless to yellow

Odour: Pungent

Evaporation rate: Slow

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Miscible

Also soluble in: Ethanol. Diethyl ether. Benzene.

Viscosity: Viscous

Boiling point/ range °C: 97.7 (28%)

Melting point/range °C: -63 (28%)

Relative density: 1.140 (28%)

pH: ≤ 1

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STABILITY AND REACTIVITY

Stability: Stable under normal conditions

Conditions to avoid: Heat

Materials to avoid: Bases. Metals. Sodium Hypochlorite and Sodium Chlorite. Reducing agents. Amines. Ammonia. Can react violently with oxidising agents liberating chlorine. Exothermic reaction with alkalis. DO NOT mix with any other chemicals.

Haz. Decomp.products: Toxic hydrogen chloride gas is evolved on heating. Corrosive action on most metals generate hydrogen gas. Reacts violently with alkalis, concentrated sulphuric acid, amines and ammonia solution.

TOXICOLOGICAL INFORMATION

Chronic toxicity: The principle routes of exposure are skin contact and inhalation. Repeated exposure to low levels may produce erosion of the teeth and ulceration of the nasal septum and gums.

ECOLOGICAL INFORMATION

Mobility: HCl may layer across the bottom surface of a water body.

Persistence and degradability: Hydrochloric Acid will be neutralised slowly by natural alkalinity and carbon dioxide in water bodies. It will react with NH₃ and organic matter in natural waters, slowly reducing the damage produced by low pH. The low pH is the major cause of death to aquatic life. Persistence in the terrestrial environment can be significant and is dependent on soil pH. Soil resident organisms will be killed. Low pH can adversely effect soil structure.

Bioaccumulative potential: No accumulation potential.

Other adverse effects: Toxic to aquatic organisms. The Lc₅₀ (96 hours) for invertebrates ranges from pH 1.2 to 5.1 depending on the species. The median lethal dose concentrations for fresh water fish range from 4 to 100 mg/l depending on the species and the mineral content of the water. Similar trends are seen for other measurements of aquatic toxicity. Hydrochloric acid may adversely effect coagulation process in water treatment plants due to the low pH.

DISPOSAL CONSIDERATION

Disposal operations: Disposal should be in accordance with local, state or national regulations. The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted.

This product and any uncleaned containers must be disposed of hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments

Disposal of packaging: Dispose of according to local and national regulations.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal. This product is subject to The Carriage of Dangerous Goods (Classification, Packaging and Labelling) and Use of Transportable Pressure Receptacles Regulations and their amendments. (United Kingdom)

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TRANSPORT INFORMATION

ADR/RID

UN no: 1789

Packing group: II

Shipping name: HYDROCHLORIC ACID

Labelling: 8

ADR Class: 8

Classification code: C1

Hazard ID no: 80

IMDG / IMO

UN no: 1789

Packing group: II

Marine pollutant: NO

Class: 8

EmS: F-A, S-B

Labelling: 8

IATA / ICAO

UN no: 1789

Packing group: II

Labelling: 8

Class: 8

Packing instructions: 809(P&CA); 813(CAO)

REGULATORY INFORMATION

Hazard Symbols: Corrosive



Risk phrases: R34: Causes burns. R37: Irritating to respiratory system

Safety phrases: S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label if possible).

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

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OTHER INFORMATION

Risk phrases used in s.2: R34: Causes burns R37: Irritating to respiratory system.

Legal disclaimer: All information concerning our product is supplied to the best of our knowledge and believed to be reliable. However, no warranty is made, either expressed or implied, regarding the accuracy of the information. It remains the user's responsibility to determine the safety, toxicity and suitability for their own use.

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Product Manager