

SAFETY DATA SHEET

HYDROCHLORIC ACID 32%

1. IDENTIFICATION OF PRODUCT / COMPANY

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Product name: HYDROCHLORIC ACID 32%
EINECS number: 231-595-7
Index no: 017-002-01-X
Stock code: HYDACI32

2. COMPOSITION / INFORMATION ON INGREDIENTS

3. HAZARD IDENTIFICATION

Main hazards: Causes burns. Irritating to respiratory system.

4. 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.

Ingestion: There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Corrosive burns may appear around the lips. Nausea and stomach pain may occur. There may be vomiting. Blood may be vomited.

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.

4. 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. If substance swallowed is corrosive, 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.

5. FIRE FIGHTING MEASURES

Extinguishing media: Carbon dioxide. Water fog.

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.

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

6. ACCIDENTAL RELEASE MEASURES

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

Environmental precautions: Do not discharge into drains or rivers.

Clean-up procedures: Cover the spillage with sodium bicarbonate or similar powdered alkali. Mix together carefully. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Wash the spillage site with large amounts of water.

7. HANDLING AND STORAGE

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

Storage conditions: Store in cool, well ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Suitable respiratory protective device.

Hand protection: Protective gloves made of PVC.

Eye protection: Goggles. Face shield. Ensure eye bath is to hand.

Skin protection: Protective clothing with elasticated cuffs and closed neck. Boots made of PVC. Ensure safety shower is to hand.

STEL (15 min exposure limit): 7.6 mg/m³

9. PHYSICAL AND CHEMICAL PROPERTIES

State: Liquid

Colour: Colourless

Odour: Pungent

Viscosity: Viscous

Oxidising: Non-oxidising (by EC criteria)

Evaporation rate: Slow

Solubility in water: Miscible

Also soluble in: Ethanol. Diethyl ether. Benzene.

Boiling point/range°C: 110

Melting point/range°C: -40

Relative density: 1.160

pH: <1

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Conditions to avoid: Heat.

Materials to avoid: Bases. Reducing agents. Amines. Ammonia.

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

11. TOXICOLOGICAL INFORMATION

Routes of exposure The principle routes of exposure are skin contact and inhalation.

12. ECOLOGICAL EFFECTS

Mobility: HCl may layer across the bottom surface of a water body. This effect may be more pronounced where there is little potential to be mixed by natural turbulence.

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 the 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.

Accumulation:

No bioaccumulation potential.

Short / long-term effects:

Toxic to aquatic organisms. The Lc50 (96 hour) 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 processes in water treatment plants due to the low pH.

13. DISPOSAL CONSIDERATIONS

Waste disposal:

Dissolve in excess water and adjust pH to neutrality if necessary. Disposal should be dealt with only by qualified personnel familiar with the specific substance.

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.

14. TRANSPORT INFORMATION

ADR / RID

UN no: U.N. 1789

ADR Class: 8

Hazard ID no: H.I.N. 80

Item no: 5(b)

Labelling: 8

IMDG / IMO

UN no: U.N. 1789

Class: 8

Packing group: II

EmS: 8-03

Marine pollutant: NO

MFAG: 700

Labelling: CORROSIVE

IATA / ICAO

UN no: U.N. 1789

Class: 8

Packing group: II

Packing instructions: 813

Quantity: 30L

Labelling: CORROSIVE

15. REGULATORY INFORMATION

Hazard symbols:

Corrosive.

Risk phrases:

R34: Causes burns.

R37: Irritating to respiratory system.

Safety phrases:

S26: In case of contact with the 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 where 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