

Chlorosulfonic acid

Bulk Chemicals and Intermediates | Technical Data Sheet

Synonyms

Chlorosulfuric acid; Sulfuric chlorohydrin



Molecular formula HO_3SCI Molecular weight116.5CAS number7790-94-5EINECS number232-234-6

Specifications

Appearance Pale yellow to amber coloured liquid

pH Acidic

Strength (by titration)

Free sulfur trioxide
Chloride as HCl
Fe content

98% w/w minimum
0.5% w/w maximum
50 ppm maximum

Physical properties

Melting point -80°C Boiling point 158°C

Vapour pressure 1 mmHg at 20°C Specific gravity 1.74 to 1.76 at 20°C

Description

Chlorosulfonic acid is a pale yellow to amber coloured fuming liquid with a strong odour. It hydrolyses in the presence of water.

Applications

Intermediate for chemicals and dyes

Packaging

Chlorosulfonic acid is available in tankers.

Storage and handling

Keep the container dry. Do not breathe the gas | fumes | vapours | spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, get immediate medical advice. Avoid contact with skin and eyes. Keep away from incompatible materials such as reducing agents, organic materials, metals, alkalis and moisture. It may corrode metallic surfaces. Store in a metallic drum using a strong polyethylene inner package. Always refer to the Safety Data Sheet (SDS) for detailed information on storage and handling.



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Safety

Wear personal protective equipment (PPE). Ensure adequate ventilation. Prevent breathing of mist or vapours. Prevent contact with skin, eyes and clothing. Always wear a self-contained breathing apparatus or a full-face airline respirator while using this chemical. Refer to the SDS for detailed information on safety.

First aid

Eye contact: Immediately flush eyes with running water for at least 15 minutes, keeping the eyelids open. Cold water may be used. Do not use an eye ointment. Get immediate medical attention.

Skin contact: Remove contaminated clothing as quickly as possible, protecting the hands and body. Place the individual under a deluge shower. If the chemical falls on exposed skin, wash the affected area gently and thoroughly with running water and non-abrasive soap. Wash contaminated clothing before reuse. If irritation persists, get immediate medical attention.

Ingestion: Do not induce vomiting. Loosen tight clothing such as collar, tie, belt or waistband. Call a physician.

Inhalation: Allow the individual to rest in a well-ventilated area. If the individual is not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Spills and disposal

Soak up the spilled material with an inert absorbent material and dispose of as hazardous waste. Do not flush the spilled area with water. Keep in suitable, closed containers for disposal. Ensure adequate ventilation. Evacuate personnel to safe areas. Do not touch the spilled material. Use a water spray curtain to divert vapour drift. Prevent entry into sewers, basements or confined areas; dike if needed. Waste must be disposed of in accordance with federal, state or local regulations, as applicable.

Contact

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Last updated: November 2016

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