

CHLOROSULFONIC ACID**1039**

October 2001

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 RTECS No: FX5730000
 UN No: 1754
 EC No: 016-017-00-1

Sulfuric chlorohydrin
 Chlorosulfuric acid
 $\text{ClHO}_3\text{S} / \text{SO}_2(\text{OH})\text{Cl}$
 Molecular mass: 116.52

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Not combustible but enhances combustion of other substances. Many reactions may cause fire or explosion. Gives off irritating or toxic fumes (or gases) in a fire.	NO contact with alcohol, combustibles, reducing agents and water.	In case of fire in the surroundings: powder, carbon dioxide NO water.
EXPLOSION	Risk of fire and explosion on contact with many substances.		In case of fire: cool drums, etc., by spraying with water but avoid contact of the substance with water.

EXPOSURE		PREVENT GENERATION OF MISTS! AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Sore throat. Cough. Burning sensation. Shortness of breath. Laboured breathing. Symptoms may be delayed (see Notes).	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.
Skin	Pain. Redness. Serious skin burns.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Pain. Redness. Severe deep burns.	Face shield, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Burning sensation. Abdominal pain. Nausea. Shock or collapse.	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Do NOT induce vomiting. Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Cautiously neutralize remainder with alkaline materials such as lime, crushed limestone, sodium bicarbonate, or soda ash. Then wash away with plenty of water. Do NOT absorb in saw-dust or other combustible absorbents. (Extra personal protection: complete protective clothing including self-contained breathing apparatus.)	<p>C Symbol R: 14-35-37 S: (1/2-)26-45 UN Hazard Class: 8 UN Pack Group: I</p> <p>Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs.</p>

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-80G10a ; NFPA Code: H4; F0; R2; W, OX	Separated from food and feedstuffs. See Chemical Dangers. Dry. Well closed.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS TO YELLOW LIQUID, WITH PUNGENT ODOUR.

Chemical dangers

The substance decomposes on heating on contact with water producing toxic and corrosive fumes.

The substance is a strong oxidant and reacts violently with combustible and reducing materials. The substance is a strong acid, it reacts violently with bases and is corrosive. Reacts violently with alcohols, powdered metals, phosphorus, nitrates and many other substances causing fire and explosion hazard.

Occupational exposure limits

TLV not established.

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour and by ingestion.

Inhalation risk

A harmful contamination of the air can be reached rather quickly on evaporation of this substance at 20°C.

Effects of short-term exposure

The substance is very corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation of the vapour may cause lung oedema (see Notes). The effects may be delayed. Medical observation is indicated.

Effects of long-term or repeated exposure

Lungs may be affected by repeated or prolonged exposure. The substance may have effects on the teeth, resulting in erosion.

PHYSICAL PROPERTIES

Boiling point at 100kPa: 151-152°C

Melting point: -80°C

Relative density (water = 1): 1.75

Solubility in water: reaction

Vapour pressure, Pa at 20°C: 133

Relative vapour density (air = 1): 4.02

ENVIRONMENTAL DATA

NOTES

Reacts violently with fire extinguishing agents such as water.

The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential.

Depending on the degree of exposure, periodic medical examination is suggested.

ADDITIONAL INFORMATION

LEGAL NOTICE

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