CHLOROACETIC ACID

0235
May 2003

CAS No: 79-11-8
RTECS No: AF8575000
UN No: 1751
EC No: 607-003-00-1

Chloroethanoic acid
Monochloroacetic acid
MCA
$C_2H_3ClO_2$ / $ClCH_2COOH$
Molecular mass: 94.5

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames.	Powder, alcohol-resistant foam, water spray, carbon dioxide.
EXPLOSION			In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		**AVOID ALL CONTACT!**	**IN ALL CASES CONSULT A DOCTOR!**
Inhalation	Burning sensation. Cough. Sore throat. Laboured breathing. Vomiting. Convulsions. Unconsciousness. 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	MAY BE ABSORBED! Redness. Pain. Skin burns.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Redness. Pain. Severe deep burns.	Face shield or eye protection in combination with breathing protection if powder.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Abdominal pain. Burning sensation. Shock or collapse. Convulsions. Unconsciousness.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING	
Personal protection: chemical protection suit including self-contained breathing apparatus. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place.	T Symbol N Symbol R: 25-34-50 S: (1/2-)23-37-45-61 UN Hazard Class: 6.1 UN Subsidiary Risks: 8 UN Pack Group: II	Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-61S1751 NFPA Code: H 3; F 1; R 0	Separated from strong bases, food and feedstuffs. Dry. Well closed.

IPCS
International Programme on Chemical Safety

Prepared in the context of cooperation between the International Programme on Chemical Safety and the European Commission

SEE IMPORTANT INFORMATION ON THE BACK.

IMPORTANT DATA

Physical State; Appearance
COLOURLESS, HYGROSCOPIC CRYSTALS, WITH PUNGENT ODOUR.

Chemical dangers
The substance decomposes on burning producing toxic fumes including hydrogen chloride, phosgene. The solution in water is a medium strong acid. Attacks metal.

Occupational exposure limits
TLV not established.
MAK: IIb (not established but data is available) (DFG 2004).

Routes of exposure
The substance can be absorbed into the body by inhalation and through the skin and by ingestion.

Inhalation risk
No indication can be given about the rate in which a harmful concentration in the air is reached on evaporation of this substance at 20/C.

Effects of short-term exposure
The substance is corrosive to the eyes, the skin and the respiratory tract. Inhalation of aerosol may cause lung oedema (see Notes). The substance may cause effects on the cardiovascular system and central nervous system, resulting in cardiac disorders, convulsions and kidney impairment. Exposure at high levels may result in death. The effects may be delayed. Medical observation is indicated.

PHYSICAL PROPERTIES

Boiling point: 189/C
Melting point: see Notes
Density: 1.58
Solubility in water: very good
Vapour pressure, Pa at 25/C: 8.68
Relative vapour density (air = 1): 3.26
Flash point: 126/C c.c.
Auto-ignition temperature: 470/C
Explosive limits, vol% in air: 8 -?
Octanol/water partition coefficient as log Pow: 0.34

ENVIRONMENTAL DATA

The substance is harmful to aquatic organisms.

NOTES

Melting point of alpha form = 63/C, beta form = 56.2/C, gamma form = 52.5/C.
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 are therefore essential.
Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.
Other UN numbers: 1750 Chloroacetic acid, solution; 3250 Chloroacetic acid, molten.
Card has been partly updated in October 2005. See section Occupational Exposure Limits.

ADDITIONAL INFORMATION