OXALIC ACID DIHYDRATE

0707
December 1990

CAS No: 6153-56-6
RTECS No: RO2450000
UN No:
EC No: 607-006-00-8 (anhydrous)

Ethanedioic acid dihydrate
Dicarbolic acid dihydrate
$C_2H_2O_4.2H_2O$ / $HOOCCOOH.2H_2O$
Molecular mass: 126.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Combustible.	NO open flames.	Water spray, powder.
EXPLOSION			

EXPOSURE		**PREVENT DISPERSION OF DUST! STRICT HYGIENE!**	
Inhalation	Cough. Shortness of breath. Sore throat.	Local exhaust or breathing protection.	Fresh air, rest. Half-upright position. Refer for medical attention.
Skin	MAY BE ABSORBED! Dry skin. Redness. Skin burns. Pain. Blisters.	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.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Abdominal cramps. Sore throat. Vomiting. Weakness. Convulsions.	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**
Sweep spilled substance into containers. Wash away remainder with plenty of water (extra personal protection: P2 filter respirator for harmful particles).	Xn Symbol R: 21/22 S: (2-)24/25

EMERGENCY RESPONSE	**STORAGE**
	Separated from strong oxidants, strong bases.

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 CRYSTALS.

Chemical Dangers
The substance decomposes on rapid heating above about 150°C producing toxic gas. The solution in water is a medium strong acid which reacts violently with strong bases. Reacts violently with oxidants causing fire and explosion hazard. Reacts with silver, forming explosive products.

Occupational Exposure Limits
TLV: ppm; 1 mg/m^3 (ACGIH 1989).
PDK not established.

Routes of Exposure
The substance can be absorbed into the body by inhalation of its aerosol, through the skin, and by ingestion.

Inhalation Risk
A harmful contamination of the air will not or will only very slowly be reached on evaporation of this substance at 20°C, on dispersing however much faster. Heating may lead to harmful concentration.

Effects of Short-term Exposure
The substance is corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation of the varpour may cause lung oedema (see Notes). Exposure at high concentration could cause shock and convulsions. In these cases kidney damage may occur. Medical observation is indicated.

Effects of Long-term or Repeated Exposure
The substance may have effects on the kidneys, resulting in kidney stones.

PHYSICAL PROPERTIES

Sublimation point: see Notes
Melting point: 102°C
Relative density (water = 1): 1.7
Solubility in water, g/100 ml: 10

Vapour pressure, Pa at 30°C: see Notes
Relative vapour density (air = 1): 3.1
Octanol/water partition coefficient as log Pow: -0.43/-0.81

ENVIRONMENTAL DATA

NOTES

The apparent melting point caused by loss of crystal water is given. The water-free substance anhydrous oxalic acid has a sublimation point of 157°C, while melting takes place at 187°C (under decomposition) after rapid heating. The vapour pressure of anhydrous oxalic acid amounts 0.04 Pa at 30°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 spray, by a doctor or a person authorized by him/her, should be considered. The recommendations on this Card also apply to anhydrous oxalic acid.

ADDITIONAL INFORMATION