

OXALIC ACID**0529**

March 1996

CAS No: 144-62-7
 RTECS No: RO2450000
 UN No:
 EC No: 607-006-00-8

Ethanedioic acid
 $C_2H_2O_4 / (COOH)_2$
 Molecular mass: 90.04

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	Sore throat. Cough. Burning sensation. Shortness of breath. Laboured breathing. Symptoms may be delayed (see Notes).	Local exhaust or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration if indicated. Refer for medical attention.
Skin	Redness. Skin burns. Pain. Blisters.	Protective clothing.	First rinse with plenty of water, then remove contaminated clothes and rinse again. Refer for medical attention.
Eyes	Redness. Pain. Loss of vision. 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	Sore throat. Burning sensation. Abdominal pain. Vomiting. Drowsiness. Shock or collapse. Convulsions.	Do not eat, drink, or smoke during work. Wash hands before eating.	Rinse mouth. Rest. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Sweep spilled substance into plastic containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. (Extra personal protection: P2 filter respirator for harmful particles).	Xn Symbol R: 21/22 S: (2-)24/25 UN Hazard Class: UN Subsidiary Risks: Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	STORAGE
NFPA Code: H3; F1; R0;	Separated from strong oxidants, food and feedstuffs. Dry.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS CRYSTALS OR WHITE POWDER.

Chemical Dangers

On contact with hot surfaces or flames this substance decomposes forming formic acid and carbon monoxide. The solution in water is a medium strong acid. Reacts violently with strong oxidants causing fire and explosion hazard. Reacts with some silver compounds to form explosive silver oxalate.

Occupational Exposure Limits

TLV: ppm; 1 mg/m³;
2 mg/m³ (STEL) (ACGIH 1995-1996).

Routes of Exposure

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

Inhalation Risk

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly if powdered.

Effects of Short-term Exposure

Corrosive. The substance is corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation of aerosol may cause lung oedema (see Notes). The substance may cause effects on the kidneys. Exposure far above the OEL may result in death. Medical observation is indicated.

Effects of Long-term or Repeated Exposure

Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the kidneys, resulting in stones.

PHYSICAL PROPERTIES

Sublimation point: 157°C
Melting point (decomposes): 189.5°C
Relative density (water = 1): 1.9

Solubility in water: moderate
Octanol/water partition coefficient as log Pow: -0.7 (estimated)

ENVIRONMENTAL DATA

NOTES

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. Do NOT use in the vicinity of a fire or a hot surface, or during welding.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information