PROPIONIC ACID

0806
October 1997

CAS No: 79-09-4
RTECS No: UE5950000
UN No: 1848
EC No: 607-089-00-0

Ethylformic acid
Methylacetic acid
Propanoic acid
Ethanecarboxylic acid
$C_3H_6O_2$ / CH_3CH_2COOH
Molecular mass: 74.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Flammable.	NO open flames, NO sparks, and NO smoking.	Powder, alcohol-resistant foam, water spray, carbon dioxide.
EXPLOSION	Above 54°C explosive vapour/air mixtures may be formed.	Above 54°C use a closed system, ventilation, and explosion-proof electrical equipment.	In case of fire: keep drums, etc., cool by spraying with water.
EXPOSURE		**AVOID ALL CONTACT!**	
Inhalation	Burning sensation. Cough. Shortness of breath. Sore throat.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Refer for medical attention.
Skin	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. Blurred vision. 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. Burning sensation. Nausea. Shock or collapse. Sore throat. Vomiting.	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	
Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT let this chemical enter the environment. (extra personal protection: chemical protection suit including self-contained breathing apparatus).	C Symbol R: 34 S: (1/2-)23-36-45 Note: B UN Hazard Class: 8 UN Pack Group: III	Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-642 NFPA Code: H3; F2; R0;	Fireproof. Separated from strong oxidants, strong bases, food and feedstuffs.

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
OILY COLOURLESS LIQUID, WITH PUNGENT ODOUR.

Chemical Dangers
The substance is a medium strong acid. Reacts with bases, strong oxidants and amines causing fire and explosion hazard. Attacks many metals forming flammable/explosive gas (hydrogen -- see ICSC # 0001).

Occupational Exposure Limits
TLV: 10 ppm; 30 mg/m^3 (ACGIH 1997).
MAK: 10 ppm; 30 mg/m^3; (1996)

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 corrosive to the eyes, the skin, and the respiratory tract.

PHYSICAL PROPERTIES

Boiling point: 141°C
Melting point: -21°C
Relative density (water = 1): 0.99
Solubility in water: very good
Vapour pressure, Pa at 20°C: 390
Relative vapour density (air = 1): 2.6
Relative density of the vapour/air-mixture at 20°C (air = 1): 1.01
Flash point: 54°C c.c. 57°C o.c.
Auto-ignition temperature: 485°C
Explosive limits, vol% in air: 2.1-12
Octanol/water partition coefficient as log Pow: 0.33

ENVIRONMENTAL DATA

The substance is harmful to aquatic organisms.

NOTES

Luprosil, Prozoin, Tenox P Grain Preservative and Tenox P are trade names.

ADDITIONAL INFORMATION