

**ACETALDEHYDE****0009**

November 2003

**CAS No: 75-07-0**  
RTECS No: AB1925000  
UN No: 1089  
EC No: 605-003-00-6

Acetic aldehyde  
Ethanal  
Ethyl aldehyde  
C<sub>2</sub>H<sub>4</sub>O / CH<sub>3</sub>CHO  
Molecular mass: 44.1

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
<b>FIRE</b>	Extremely flammable.	NO open flames, NO sparks, and NO smoking. NO contact with hot surfaces.	Powder, alcohol-resistant foam, water in large amounts, carbon dioxide.
<b>EXPLOSION</b>	Vapour/air mixtures are explosive.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Do NOT use compressed air for filling, discharging, or handling. Use non-sparking handtools.	In case of fire: keep drums, etc., cool by spraying with water.

EXPOSURE		AVOID ALL CONTACT!	
<b>Inhalation</b>	Cough.	Ventilation. Local exhaust or breathing protection.	Fresh air, rest. Refer for medical attention.
<b>Skin</b>	Redness. Pain.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.
<b>Eyes</b>	Redness. Pain.	Safety goggles, 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.
<b>Ingestion</b>	Diarrhoea. Dizziness. Nausea. Vomiting.	Do not eat, drink, or smoke during work.	Rinse mouth. Give plenty of water to drink. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Remove all ignition sources. 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 absorb in saw-dust or other combustible absorbents. Remove vapour with fine water spray. Do NOT let this chemical enter the environment. Personal protection: filter respirator for organic gases and vapours.	F+ Symbol Xn Symbol R: 12-36/37-40 S: (2-)16-33-36/37 UN Hazard Class: 3 UN Pack Group: I  Unbreakable packaging; put breakable packaging into closed unbreakable container.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-30S1089 NFPA Code: H 2; F 4; R 2	Fireproof. Separated from incompatible materials. See Chemical Dangers. Cooled. Keep in the dark. Store only if stabilized.

### IMPORTANT DATA

**Physical State; Appearance**

GAS OR COLOURLESS LIQUID, WITH PUNGENT ODOUR.

**Physical dangers**

The vapour is heavier than air and may travel along the ground; distant ignition possible.

**Chemical dangers**

The substance can form explosive peroxides in contact with air. The substance may polymerize under the influence of acid(s) and alkaline hydroxides in the presence of trace metals (iron) with fire or explosion hazard. The substance is a strong reducing agent and reacts violently with oxidants, strong acids halogens and amines causing fire and explosion hazard.

**Occupational exposure limits**

TLV: 25 ppm (Ceiling value); A3; (ACGIH 2003).  
MAK: 50 ppm, 91 mg/m<sup>3</sup>; Peak limitation category: I(1);  
Carcinogen category: 3B; Pregnancy risk group: D; (DFG 2003).

**Routes of exposure**

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

**Inhalation risk**

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

**Effects of short-term exposure**

The substance is mildly irritating to the eyes, the skin and the respiratory tract. The substance may cause effects on the central nervous system.

**Effects of long-term or repeated exposure**

Repeated or prolonged contact with skin may cause dermatitis. The substance may have effects on the respiratory tract, resulting in tissue lesions. This substance is possibly carcinogenic to humans.

### PHYSICAL PROPERTIES

Boiling point: 20.2/C  
Melting point: -123/C  
Relative density (water = 1): 0.78  
Solubility in water: miscible  
Vapour pressure, kPa at 20/C: 101

Relative vapour density (air = 1): 1.5  
Flash point: -38/C c.c.  
Auto-ignition temperature: 185/C  
Explosive limits, vol% in air: 4-60  
Octanol/water partition coefficient as log Pow: 0.63

### ENVIRONMENTAL DATA

The substance is harmful to aquatic organisms.

### NOTES

Depending on the degree of exposure, periodic medical examination is suggested.  
The occupational exposure limit value should not be exceeded during any part of the working exposure.  
An added stabilizer or inhibitor can influence the toxicological properties of this substance, consult an expert.  
Rinse contaminated clothes (fire hazard) with plenty of water.

### ADDITIONAL INFORMATION

**LEGAL NOTICE**

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible