

# FORMALDEHYDE

0275

October 2004

CAS No: 50-00-0  
RTECS No: LP8925000

Methanal  
Methyl aldehyde  
Methylene oxide  
(cylinder)  
H<sub>2</sub>CO  
Molecular mass: 30.0

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.	Shut off supply; if not possible and no risk to surroundings, let the fire burn itself out; in other cases extinguish with powder, carbon dioxide.
<b>EXPLOSION</b>	Gas/air mixtures are explosive.	Closed system, ventilation, explosion-proof electrical equipment and lighting.	In case of fire: keep cylinder cool by spraying with water.

EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
<b>Inhalation</b>	Burning sensation. Cough. Headache. Nausea. Shortness of breath.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.
<b>Skin</b>		Cold-insulating gloves.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
<b>Eyes</b>	Causes watering of the eyes. Redness. Pain. Blurred vision.	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>		Do not eat, drink, or smoke during work.	

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Ventilation. Remove all ignition sources. Remove gas with fine water spray. Do NOT wash away into sewer. Personal protection: complete protective clothing including self-contained breathing apparatus.	

EMERGENCY RESPONSE	SAFE STORAGE
	Fireproof. Cool.

### IMPORTANT DATA

**Physical State; Appearance**

GAS, WITH CHARACTERISTIC ODOUR.

**Physical dangers**

The gas mixes well with air, explosive mixtures are formed easily.

**Chemical dangers**

The substance polymerizes due to warming. Reacts with oxidants.

**Occupational exposure limits**

TLV: 0.3 ppm (Ceiling value); A2; SEN; (ACGIH 2004).  
MAK: 0.3 ppm, 0.37 mg/m<sup>3</sup>; Sh; Peak limitation category: I(2);  
Carcinogen category: 4; Germ cell mutagen group: 5; Pregnancy risk group: C; (DFG 2004).

**Routes of exposure**

The substance can be absorbed into the body by inhalation.

**Inhalation risk**

On loss of containment, a harmful concentration of this gas in the air will be reached very quickly.

**Effects of short-term exposure**

The substance is severely irritating to the eyes and is irritating to the respiratory tract. Inhalation of may cause lung oedema (see Notes).

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

This substance is carcinogenic to humans.

### PHYSICAL PROPERTIES

Boiling point: -20/C  
Melting point: -92/C  
Relative density (water = 1): 0.8  
Solubility in water: very good

Relative vapour density (air = 1): 1.08  
Flash point: Flammable Gas  
Auto-ignition temperature: 430/C  
Explosive limits, vol% in air: 7-73

### 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 is therefore essential.  
Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.  
The occupational exposure limit value should not be exceeded during any part of the working exposure.

### ADDITIONAL INFORMATION

**LEGAL NOTICE**

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