


**FORMALDEHYDE****ICSC: 0275**Methyl aldehyde  
Methylene oxide  
Methanal**June 2012****CAS #: 50-00-0****UN #: (see Notes)****EC Number: 200-001-8**

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
<b>FIRE &amp; EXPLOSION</b>	Extremely flammable. Gas/air mixtures are explosive. Risk of explosion on contact with strong oxidants, strong acids or strong bases.	NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. NO contact with incompatible materials: See Chemical Dangers	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. In case of fire: keep drums, etc., cool by spraying with water.

AVOID ALL CONTACT!			
	SYMPTOMS	PREVENTION	FIRST AID
<b>Inhalation</b>	Cough. Sore throat. Burning sensation behind the breastbone. Headache. Shortness of breath.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer immediately for medical attention.
<b>Skin</b>	Redness.	Protective gloves.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Seek medical attention if you feel unwell.
<b>Eyes</b>	Watering of the eyes. Redness. Pain. Blurred vision.	Wear safety goggles or eye protection in combination with breathing protection.	Rinse with plenty of water (remove contact lenses if easily possible). Refer immediately for medical attention.
<b>Ingestion</b>			

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Evacuate danger area! Consult an expert! Personal protection: gas-tight chemical protection suit including self-contained breathing apparatus. Remove all ignition sources. Turn off gas at source if possible. Remove gas with fine water spray.	<p><b>According to UN GHS Criteria</b></p> <div style="text-align: center;">  <p><b>DANGER</b></p> </div> <p>Extremely flammable gas Fatal if inhaled Causes serious eye irritation May cause cancer if inhaled May cause an allergic skin reaction May cause respiratory irritation</p> <p><b>Transportation</b> <b>UN Classification</b></p>
STORAGE	
Fireproof. Cool. Separated from incompatible materials. See Chemical Dangers.	
PACKAGING	

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PHYSICAL & CHEMICAL INFORMATION		
<b>Physical State; Appearance</b> COLOURLESS GAS WITH PUNGENT ODOUR.		Formula: H <sub>2</sub> CO Molecular mass: 30.0 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 Auto-ignition temperature: 430°C Explosive limits, vol% in air: 7-73 Octanol/water partition coefficient as log Pow: 0,35
<b>Physical dangers</b> The gas mixes well with air, explosive mixtures are easily formed.		
<b>Chemical dangers</b> The substance polymerizes in contact with alkalis and if dissolved in water. Upon heating, toxic fumes are formed. Reacts violently with strong oxidants, strong acids and strong bases. This generates explosion hazard.		

EXPOSURE & HEALTH EFFECTS	
<b>Routes of exposure</b> The substance can be absorbed into the body by inhalation.	<b>Inhalation risk</b> A harmful concentration of this gas in the air will be reached very quickly on loss of containment.
<b>Effects of short-term exposure</b> The substance is severely irritating to the eyes and respiratory tract. Inhalation of high concentrations may cause lung oedema, but only after initial corrosive effects on the eyes and the upper respiratory tract have become manifest.	<b>Effects of long-term or repeated exposure</b> Repeated or chronic inhalation of the vapour may cause chronic inflammation of the upper respiratory tract. Repeated or prolonged contact may cause skin sensitization. This substance is carcinogenic to humans.

OCCUPATIONAL EXPOSURE LIMITS
TLV: 0.1 ppm as TWA; 0.3 ppm as STEL; (SEN); A1 (confirmed human carcinogen). MAK: 0.37 mg/m <sup>3</sup> , 0.3 ppm; peak limitation category: I(2); carcinogen category: 4; pregnancy risk group: C; germ cell mutagen group: 5; sensitization of skin (SH). EU-OEL: 0,37 mg/m <sup>3</sup> , 0,3 ppm as TWA; 0,74 mg/m <sup>3</sup> , 0,6 ppm as STEL; (skin sensitizer); (see Notes)

ENVIRONMENT

NOTES
Immediate administration of an appropriate inhalation therapy by a doctor, or by an authorized person, should be considered. No UN number is presented because formaldehyde is not transported as a gas. It is usually transported as a solution. See ICSC 0695. Limit value for EU-OEL of 0,62 mg/m <sup>3</sup> or 0,5 ppm for the health care, funeral and embalming sectors until 11 July 2024.

ADDITIONAL INFORMATION
<b>EC Classification</b> Symbol: T; R: 23/24/25-34-40-43; S: (1/2)-26-36/37/39-45-51

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