


GLUTARALDEHYDE (50% SOLUTION) 1,5-Pentanedial (50% solution)	ICSC: 0352 May 2018
CAS #: 111-30-8 UN #: 2810 EC Number: 203-856-5	

	ACUTE HAZARDS	PREVENTION	FIRE FIGHTING
FIRE & EXPLOSION	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings, use appropriate extinguishing media.

AVOID ALL CONTACT!			
	SYMPTOMS	PREVENTION	FIRST AID
Inhalation	Cough. Sore throat. Nosebleeds. Laboured breathing. Further see Ingestion.	Use ventilation, local exhaust or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer immediately for medical attention.
Skin	Redness. Pain. Burning sensation.	Protective gloves. Protective clothing.	Wear protective gloves when administering first aid. Remove contaminated clothes. Rinse skin with plenty of water or shower for at least 15 minutes. Refer immediately for medical attention.
Eyes	Redness. Pain. Burning sensation.	Wear safety goggles or eye protection in combination with breathing protection.	Rinse with plenty of water for several minutes (remove contact lenses if easily possible). Refer immediately for medical attention.
Ingestion	Abdominal pain. Nausea. Diarrhoea. Vomiting.	Do not eat, drink, or smoke during work.	Rinse mouth. Give one or two glasses of water to drink. Do NOT induce vomiting. Refer immediately for medical attention.

SPILLAGE DISPOSAL	CLASSIFICATION & LABELLING
Consult an expert! Personal protection: chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb liquid in sand or inert absorbent. Wash away remainder with plenty of water. Store and dispose of according to local regulations.	<p>According to UN GHS Criteria</p>  <p style="text-align: center;">DANGER</p> <p>Toxic if swallowed Fatal if inhaled Causes serious eye irritation Causes skin irritation May cause respiratory irritation May cause an allergic skin reaction May cause allergy or asthma symptoms or breathing difficulties if inhaled Very toxic to aquatic life</p> <p>Transportation UN Classification UN Hazard Class: 6.1; UN Pack Group: II</p>
STORAGE	
Store only in original container. Well closed. Keep in the dark. Keep in a well-ventilated room. Separated from food and feedstuffs and incompatible materials. See Chemical Dangers. Store in an area without drain or sewer access.	
PACKAGING	
Do not transport with food and feedstuffs.	

Prepared by an international group of experts on behalf of ILO and WHO, with the financial assistance of the European



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PHYSICAL & CHEMICAL INFORMATION
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<p>Physical State; Appearance CLEAR COLOURLESS LIQUID WITH PUNGENT ODOUR.</p> <p>Physical dangers</p> <p>Chemical dangers The substance is a strong reducing agent. It reacts with strong bases, strong acids and strong oxidants. This generates fire and explosion hazard.</p>	<p>Formula: C₅H₈O₂ / HCO(CH₂)₃CHO</p> <p>Molecular mass: 100.1</p> <p>Boiling point: 101°C</p> <p>Melting point: -33°C</p> <p>Density: 1.33 g/cm³</p> <p>Solubility in water: miscible</p> <p>Vapour pressure, kPa at 20°C: 2.3</p> <p>Relative vapour density (air = 1): 1.05</p> <p>Flash point: >95°C c.c.</p> <p>Viscosity: 12.75 mm²/s at 25°C</p>
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EXPOSURE & HEALTH EFFECTS

<p>Routes of exposure The substance can be absorbed into the body by inhalation of its vapour, through the skin and by ingestion.</p> <p>Effects of short-term exposure The substance is irritating to the eyes, skin and respiratory tract.</p>	<p>Inhalation risk A harmful contamination of the air will be reached rather slowly on evaporation of this substance at 20°C.</p> <p>Effects of long-term or repeated exposure Repeated or prolonged contact with skin may cause dermatitis. Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation may cause asthma. See Notes.</p>
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OCCUPATIONAL EXPOSURE LIMITS

<p>TLV: 0.05 ppm as STEL; (SEN); A4 (not classifiable as a human carcinogen).</p> <p>MAK: 0.21 mg/m³, 0.05 ppm; peak limitation category: I(2); sensitization of respiratory tract and skin (SAH); carcinogen category: 4; pregnancy risk group: C</p>

ENVIRONMENT

<p>The substance is very toxic to aquatic organisms.</p>
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NOTES

<p>The occupational exposure limit value should not be exceeded during any part of the working exposure. The symptoms of asthma 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. Anyone who has shown symptoms of asthma due to this substance should avoid all further contact with this substance. See ICSC 0158.</p>

ADDITIONAL INFORMATION

<p>EC Classification Symbol: T, N; R: 23/25-34-42/43-50; S: (1/2)-26-36/37/39-45-61</p>
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