

6. Accidental Release Measures

Personal Protection	Ensure no sources of ignition. Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.
Environmental	Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
Major Spillage	Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.
Minor Spillage	Contain and absorb on inert material. Transfer absorbent to container for removal. Allow solvent to evaporate in remote area, then dispose of absorbent as solid chemical waste. Wash area down with copious amounts of water.

7. Storage & Handling

Handling Precautions	All transfer systems should be earthed to prevent accumulation of static electricity. Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing. Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.
Storage Conditions	Well ventilated, cool, dry storage . Protect from direct sun and store away from sources of ignition. Keep containers closed when not in use. Keep well separated from oxidising agents.

8.1 Workplace Exposure Limits

Component	CAS No	Workplace Exposure Limits				Maximum Exposure Limits			
		Long Term		Short Term		Long Term		Short Term	
		ppm	mg m ⁻³	ppm	mg m ⁻³	ppm	mg m ⁻³	ppm	mg m ⁻³
Methanol	67-56-1	200.0	266.0	250.0	333.0	-	-	-	-

Special Hazards Can be absorbed through skin.

8.2 Personal Protection

Respiratory	Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge organic vapour respirator, or use self contained breathing apparatus.
Hands	Use solvent resistant gloves.
Eyes	Use chemical splash proof glasses or goggles.
Skin	Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.

9. Physical & Chemical Properties

Appearance	Clear colourless liquid.
Odour	Fresh and characteristic.
pH	Not available
Boiling point	64.8 °C
Melting point	97.8- °C
Flash point	12.0 °C(Closed cup)
Upper Flammable Limit	36.5 %
Lower Flammable Limit	6.0 %
Auto Ignition	385.0 °C
Explosive properties	Moderate/severe in confined spaces.
Oxidising Properties	No.
Vapour Pressure	100 mmHg @ 20,C
Relative Density	0.7900
Water Solubility	Completely miscible in water.

10. Stability & Reactivity

Chemical Stability	Stable under normal conditions
Conditions to Avoid	Hot surfaces, naked flames or other sources of ignition.
Materials to Avoid	Bromine. Sodium hypochlorite, diethyl zinc, dialkylaluminium solutions, and phosphorous trioxide. Nitric acid, hydrogen peroxide, sodium and chloroform and potassium tertiary butoxide. Lead perchlorate.
Hazardous Decomposition Products	None unusual. Burning will produce smoke, carbon monoxide and/or carbon dioxide.

11. Toxicological Information

Eyes	Both the vapour and liquid are, very dangerous to the eyes since methanol has a specific effect on the optic nerve and retina.
Skin	Repeated exposure may cause dermatitis. Many of the effects typical of the vapour can result from absorption through the skin.
LD50 Skin	Rabbit 20g/Kg
Ingest	Ingestion will cause symptoms resembling those of alcoholic intoxication ie excitation and irritability. After a latent period of 10-15 hours more serious damage to the central nervous system especially to the optic nerve occurs. Even if death does not occur permanent blindness may occur.
LD50 Ingest	Oral Rat 13g/kg
Inhalation	Exposure to vapour concentrations above the occupational exposure limits may cause headache, nausea, vomiting and irritation of the mucous membranes. High concentrations of vapour may damage the central nervous system and cause blindness. Due to the slow metabolism of the toxic metabolites formic acid and formaldehyde the effects can be cumulative and continued exposure to low levels may cause the above effects.
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	High vapour concentrations (10000 ppm) caused increased congenital malformations.

12. Ecological

Substantially biodegradable in water, biological oxygen demand (B.O.D.) 5 day 70%. No evidence of inhibition to the aerobic treatment process at 39500mg/l but evidence of inhibition occurs at concentrations greater than 79000mg/l.

13. Disposal Considerations

Disposal Methods	Dispose of in a licensed incinerator for organic solvents. Do not dispose of as domestic waste. Never dispose of into water courses or sewerage systems due to high risk of explosion.
Contaminated Packaging	Use a licensed waste disposer. Do not attempt to burn any residual liquids due to risk of explosion.

14. Transport Information

Proper Shipping Name	Methanol
UN Number	1230
UN Classification	3 Flammable liquid
Subsidiary Risk	6.1 Toxic
Flash Point	12.0 °C(Closed cup)
Packing Group	II
Transport Category	2
Marine pollutant	No
ADR Hazard ID	336



15. Regulatory Information

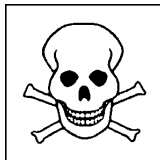
Labelling Classification Highly Flammable, Toxic.

Label Symbols

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Risk & safety Phrases Highly flammable. Toxic by inhalation, in contact with skin and if swallowed. Harmful: possible risk of irreversible effects through inhalation and if swallowed Keep locked up and out of reach of children. Keep container tightly closed. Keep away from sources of ignition - No Smoking. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label).

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16. Other Information

Document Information This document has been prepared in accordance with directive 88/379/EEC.

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment.

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