



Crown Chemical Products Inc.

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Materials Safety Data - METHYL ALCOHOL

Shipping Name	UN - 1230
Transport of Dangerous Goods Class	METHANOL
WHMIS Class	Class 3 (6.1); Packing Group II
Material Use	B 2; D 1A; D 2B
	solvent, cleaner, antifreeze, reagent

1. HAZARDOUS INGREDIENTS	CAS NUMBER	%	TWAEV (ppm)	LD ₅₀ ORAL	(mg/kg) SKIN	LC ₅₀ ppm INHALATION
Methyl Alcohol (Methanol, Methyl Hydrate)	67-56-1	100%	200	5600	16,000	64,000

2. PHYSICAL CHARACTERISTICS

Odour & Appearance	clear, colourless, liquid with faint, sharp odour
Odour Threshold	50 - 100 ppm
Vapour Pressure	92 mmHg (20°C)
Vapour Density (air = 1)	1.1 (similar to air - vapour may rise or fall)
Boiling Point	64.6 °C
Freezing Point	-98°C
Specific Gravity	0.7925 (20°C)
Water Solubility	complete

3. FLAMMABILITY & REACTIVITY

Flash Point	12°C
Autoignition Temperature	465°C
Flammable Limits	7% - 36% (NOTE: the broad flammable limits increases the risk of fire)
<u>WARNING: METHYL ALCOHOL BURNS WITH A BARELY VISIBLE PALE, BLUE FLAME!</u>	
Hazardous Combustion Products	carbon monoxide, nitrogen oxides, formaldehyde, smoke
Firefighting Precautions	foam, dry chemical, water fog, water spray only to cool, product floats on water - water jet spreads flames; firefighters must wear SCBA
Sensitivity to Static Discharge	not sensitive
Sensitivity to Mechanical Impact	not sensitive
Chemical Stability	stable; will not polymerize
Reactive With	strong oxidizing agents
Dangerous Decomposition Products	none apart from "Hazardous Combustion Products"

4. TOXICOLOGY

EFFECTS OF ACUTE EXPOSURE

Skin Contact	defatting, drying, may irritate
Skin Absorption	yes; no toxic effects anticipated by this route
Eye Contact	irritation and burning sensation; permanent damage unlikely
Inhalation	irritating vapour; headache, dizziness, drowsiness, intoxication, blurred vision
Ingestion	headache, dizziness, drowsiness, intoxication, temporary blurring of vision, and collapse

WARNING:

- 1) Ingestion of methyl alcohol can cause death.
- 2) Sublethal doses of methyl alcohol may cause blindness, but,
- 3) Effects may take 3-4 days to become apparent. *Treatment should begin IMMEDIATELY!*

(Methyl Alcohol, cont'd)

EFFECTS OF CHRONIC EXPOSURE

General repeated inhalation or ingestion may cause liver damage and progressive deterioration of eyesight
repeated exposure may cause skin cracking and dermatitis

WARNING: *Methanol is eliminated from the body slowly and accumulates with repeated absorption. If toxic effects are seen or even suspected, the victim should have no further exposure, even below the TWAEV, for one week.*

Sensitising no
Carcinogenic no
Reproductive Effect fetotoxic in female rodents at the LD₅₀; human reproductive toxin by RTECS criteria
Synergistic With existing liver disease or other hepatotoxic agents
Estimated LD₅₀ 5600 mg/kg (oral, rat); 16,000 mg/kg (skin, rabbit)
Estimated LC₅₀ 64,000 ppm (inhalation)

5. PROTECTIVE EQUIPMENT

Hands butyl or neoprene rubber gloves
Eyes chemical safety goggles
Respirator not required if ventilation is adequate (see TWAEV, (1) above) or use organic vapour cartridge
Clothing impervious (hands, above) apron, boots, long sleeves, if splashing is anticipated

6. ENVIRONMENT

Leak Precaution dyke to control spillage and prevent environmental contamination; if fire potential exists, blanket with foam as a precaution
Handling Spill ventilate contaminated area; recover free liquid with explosion-proof pumps; absorb residue on an inert sorbent (dry sand, earth) and store in closed containers for disposal
Waste Disposal **do not flush to sewer**; may be incinerated in approved facility

7. STORAGE & HANDLING

Store and use in a cool dry environment, away from sources of ignition, heat and oxidising agents. Use with adequate ventilation. Although methyl alcohol is not a static accumulator, ground the container before handling to prevent static discharge which may cause ignition. Do not cut, drill, weld or grind on or near this container. NOTE that the flammable limits for methyl alcohol are unusually broad (3 above). Avoid prolonged contact with skin and wash work clothes frequently. An eye bath and safety shower should be available near the workplace.

8. FIRST AID

SKIN: Wash with soap and plenty of water. Remove contaminated clothing and clean or launder thoroughly.
EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.
INHALATION: Remove from contaminated area promptly. **CAUTION: Rescuer must not endanger himself!** If breathing stops, administer artificial respiration and seek medical aid promptly.
INGESTION: **Quick action is vital because of the rapidity of methyl alcohol absorption.** If the victim is conscious, give plenty of water and induce vomiting. Keep victim's head below the hips to prevent inhalation of vomited material and introduce fingers into the throat. **Seek medical help promptly.**

NOTE TO PHYSICIAN: Methyl Alcohol's toxicity stems partly from its metabolism to formaldehyde and/or formic acid in the body. This is slowed by the administration of ethyl alcohol. In addition, treatment for acidosis due to formic acid production may be required for up to 4 days. Up to 4 litres of fluids per day is recommended to maintain urine flow.

Emergency telephone numbers - weekdays from 8:00 - 5:00 (705) 436-5580
at all other times (800) 567-7455 (Philip Environmental)

Prepared for Crown Chemical Products Inc. by Keith Chan, January 1, 2013.

The information herein is given in good faith but no warranty, expressed or implied, is made

PLEASE ENSURE THAT THIS MSDS IS GIVEN TO AND EXPLAINED TO THE PERSON USING THIS PRODUCT.

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