

R. H. Crown Co., Inc.
100 N. Market St.
Johnstown, New York 12095
(518) 762-4589

MATERIAL SAFETY DATA SHEET

METHANOL

I. PRODUCT INFORMATION

PRODUCT NAME:
CHEMICAL SYNONYMS:
MATERIAL USE:
MANUFACTURER:

Crown Gasline Dye & Antifreeze
Methyl Alcohol, Methyl Hydrate
Solvent, Fuel, Feedstock
Novacor Chemicals Ltd.
Methanol Division
3806 Box Springs Rd. N.W.
Medicine Hat, AB
(403) 527-8141
67-56-1
B2, D1A
Primary 3.2 Secondary 6.1
1230

EMERGENCY PHONE NUMBER(24 hr):
CAS REGISTRY NUMBER:
WHMIS CLASSIFICATION:
TDG CLASSIFICATION:
UN/PIN NUMBER:

II. INGREDIENTS OF PRODUCT

HAZARDOUS INGREDIENTS:

Methyl Alcohol %: 99.85%

III. PHYSICAL DATA

PHYSICAL STATE:
ODOUR AND APPEARANCE:
ODOUR THRESHOLD:
SPECIFIC GRAVITY:
VAPOUR PRESSURE:
VAPOUR DENSITY (AIR = 1):
% VOLATILE:
EVAPORATION RATE:
BOILING POINT:
MELTING POINT:
pH:
COEFFICIENT OF OIL/WATER
DISTRIBUTION:

Liquid
Clear, colourless liquid, slight alcohol odour
Poor, 1000 ppm
0.792 (H₂O = 1)
96 mmHg @ 20°C (68°F)
1.105 @ 15°C (59°F)
100%
4.6 (Butyl Acetate = 1)
64.5°C (148°F)
-97.8°C (-144°F)
Not available
Readily soluble in water, separates from oil

IV. FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY:
FLASHPOINT:

Yes
11°C (52°F)(TCC)

IV. FIRE AND EXPLOSION HAZARD DATA (CONT'D)

AUTO-IGNITION TEMP:	385°C (725°F)
SENSITIVITY TO IMPACT:	Not available
SENSITIVITY TO STATIC DISCHARGE:	Low
FLAMMABLE LIMITS (% Vol. in Air):	LFL 6% UFL 36%
FIRE EXTINGUISHING SUBSTANCES:	Water (4:1), Purple K dry chemical powder, AFFF (Aqueous Film Forming Foam). Alcohol resistant type with 6% foam proportioning equipment or CO ₂ .
HAZARDOUS COMBUSTION PRODUCTS:	Toxic gases and vapours such as carbon monoxide and formaldehyde.
SPECIAL FIREFIGHTING PROCEDURES:	Water may be ineffective depending upon depth of methanol burning. Use fine water spray or fog to control fire spread and cool structures or containers. Firefighters must wear full face, positive pressure, self-contained breathing apparatus or airline and appropriate protective clothing.
FIRE AND EXPLOSION HAZARDS:	Methanol burns with a clean clear flame which is almost invisible in daylight. Concentrations of greater than 20% methanol in water can be ignited.

V. REACTIVITY DATA

STABILITY:	Stable
INCOMPATIBILITIES:	Strong Oxidizers, Strong Acids, Strong Bases. May be corrosive to lead and aluminum.
CONDITIONS TO AVOID:	Avoid storage with incompatible materials.
HAZARDOUS DECOMPOSITION PRODUCTS:	Formaldehyde and Carbon Monoxide.

VI. OCCUPATIONAL EXPOSURE LIMITS

ROUTE OF ENTRY:	Skin Contact, Skin Absorption, Eye Contact, Ingestion, Inhalation, Acute/Chronic.
EXPOSURE LIMIT:	TLV-TWA/8 hour OEL - 200 ppm, 262 mg/m ³ . TLV/STEL/15 min. OEL - 250 ppm, 328 mg/m ³ .

VII. HEALTH HAZARD INFORMATION

EFFECTS OF ACUTE AND CHRONIC EXPOSURE:

INHALATION:	Irritation of mucous membrane, high levels may cause headache, sleepiness, nausea, giddiness, loss of consciousness, digestive and visual disturbances and death. NOTE: The odour threshold of methanol is several times higher than the TLV/8 hour OEL.
INGESTION:	Poisonous; causes nausea, headache, visual disturbances ranging from double vision to unconsciousness and death.
EYES:	High vapour concentration or liquid contact causes irritation, tearing and burning.
SKIN:	May be absorbed through the skin in toxic or lethal amounts. Causes mild irritation, redness, cracking and drying.

VII. HEALTH HAZARD INFORMATION (CONT'D)

CHRONIC EFFECTS:

Repeated exposure by inhalation or absorption may cause systemic poisoning, impaired vision, blindness. Inhalation may worsen conditions such as emphysema or bronchitis. Repeated skin contact may cause irritation, dryness and cracking.

TOXICITY DATA:

IRRITANT EFFECTS:

1000 ppm may cause irritation of mucous membrane.

SENSITIZATION:

No.

CARCINOGENICITY:

No.

REPRODUCTIVE EFFECT:

Reported to cause birth defects in rats exposed to 20 000 ppm.

TERATOGENIC EFFECT:

No.

MUTAGENIC EFFECT:

No.

SYNERGISTIC EFFECT:

No data.

LD₅₀/LD₅₀ DATA:

LD₅₀: Oral (rat) 6.2 - 13.0 g/kg, Dermal (rabbit) 20 ml/kg.

LC₅₀: Inhalation (rat)

64 000 ppm.

VIII. EMERGENCY FIRST AID PROCEDURES

INHALATION:

Remove to fresh air, restore or assist breathing, obtain medical attention immediately.

INGESTION:

If conscious and medical aid is not immediately available, dilute stomach contents by giving large amounts of water or milk and induce vomiting. Transport to medical attention immediately.

EYES:

Flush immediately with gently running water for 15 minutes, ensuring all surfaces and crevices are flushed. Obtain medical attention if necessary.

SKIN:

Remove clothing and wash under shower with soap and water for 15 minutes. Seek medical attention if irritation occurs.

IX. SPILL AND WASTE DISPOSAL

SPILL:

Eliminate all ignition sources, stop spill and use absorbent materials. If necessary, contain spill by diking. Recover methanol or dilute with water to reduce fire hazard. Prevent it from entering sewer, drains or waterways. Restrict access to unprotected personnel. Full-face, positive pressure S.C.B.A. or airline, and protective clothing must be worn. Intake of highly contaminated water could result in serious health problems.

WASTE DISPOSAL:

Waste materials must be disposed of in accordance with your municipal, state, provincial and federal regulations. Contact the proper authorities for specific instructions or contact the 24 HOUR EMERGENCY NUMBER: (403) 527-8141.

IX. SPILL AND WASTE DISPOSAL (CONT'D)

HANDLING PROCEDURES & EQUIPMENT:

No smoking or open flame in storage, handling areas. Use explosion proof electrical equipment. Ensure proper electrical grounding procedures are in place. Avoid protective materials of natural rubbers - use neoprene (check with manufacturer of protective materials).

SPECIAL SHIPPING INFO.:

All shipments of methanol must be properly classified, described, packaged, marked and labelled to conform with regulations set by the Canadian Transport Commission, the Transportation of Dangerous Goods Regulations, Bureau of Explosives and Hazardous Materials Regulations.

X. PREVENTIVE MEASURES

ENGINEERING CONTROLS:

In confined areas, local and general ventilation should be provided to maintain airborne concentrations below OEL. Ventilation systems must be designed according to approved engineering standards.

RESPIRATORY PROTECTION:
GLOVES:

NIOSH approved.

Neoprene recommended (check with glove manufacturer).

FOOTWEAR:
EYES:

Chemical resistant.

Face shield and safety glasses with side shield when transferring is taking place.

CLOTHING:

Wear chemical resistant pants and jackets, preferably neoprene (check with manufacturer).

STORAGE REQUIREMENTS:

Store in totally enclosed equipment, designed to avoid human contact. Tanks must be grounded and vented and should be nitrogen blanketed. Tanks must be diked.

SOURCES USED:

ACGIH TLV 1988-89. Alberta O.H. & S. Act and Regulations. Proctor & Hughes Chemical Hazards of the Workplace (1978). CCOHS 89-2 and Methanol Chemical Infogram. Clinical Toxicology of Commercial Products, 5th Edition.

PREPARED BY:

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Health, Safety and Environment Department
(403) 290-6094

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