

MATERIAL SAFETY DATA SHEET

METHANOL

Methyl Alcohol



Coastal
The Energy People

Coastal Chem, Inc.

A Subsidiary of The Coastal Corporation

8305 Otto Road, Cheyenne, Wyoming 82009
(307) 637-2700

Material Safety Data Sheet

Methyl Alcohol

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8305 Otto Road
Cheyenne, WY 82009
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CAS # 67-56-1

UN1230

STCC # 4909230

Methanol: Product Identification

Trade Names: Methanol
Synonyms: Methyl Alcohol, Wood Alcohol, MEOH, Carbinol, Wood Spirit.
Chemical Family: Alcohol
Chemical I.D. No.: UN1230; STCC # 4909230
Chemical Formula: CH₃OH
DOT Hazard Class: 3.2
Label Required: Flammable Liquid



Methanol: Components

Occupational Exposure Limits

Ingredients	CAS #	Wt%	OSHA PEL ¹	ACGIH STEL ²	NIOSH IDLH ³	UNITS
Methanol	67-56-1	>99.895%	200	250	25,000	ppm

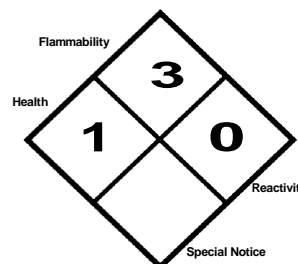
1 = Permissible Exposure Limit (8-Hr. Time Weighted Average).

2 = Short Term Exposure Limit (15 Minute Exposure).

3 = Immediately Dangerous to Life and Health.

N.A. = Not Available.

Methanol: NFPA Code



1 Health Hazard (Blue):
Can cause irritation if not treated.

3 Flammability Hazard (Red):
Can be ignited at all normal temperatures.

0 Reactivity Hazard (Yellow):
Normally stable. Not reactive with water.

NONE Special Notice (White):
(Nothing specified.)

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Methanol: Physical and Chemical Properties

Boiling Point:	148°F @ 1 Atmosphere
Vapor Pressure:	1.86 psia @ 68°F
Solubility in H₂O:	Totally miscible
Weight:	6.59 lb/gal @ 68°F
Volatile by Volume:	100%
Vapor Density:	1.11 (air = 1.0)
Odor:	Faint Alcohol Odor
Appearance:	Clear / Colorless Liquid

Methanol: Fire and Explosion Data

Flash Point:	54°F
Flammable Limits in Air %/Vol.:	Lower: 6%, Upper: 36.5%
Autoignition Temperature:	878°F
Extinguishing Media:	Dry Chemical, Carbon Dioxide or Alcohol Resistant Foam

Special Fire Fighting Procedure:

Do not extinguish fire unless product flow is stopped. Use a water spray to cool fire-exposed containers. Apply water from as far a distance as possible. Water alone may be ineffective. Methanol-Water mixtures with as little as 21% methanol are still flammable. On larger fires use a water spray, fog and Alcohol Resistant, Aqueous-Film-Forming-Foam (AR-AFFF's).

Unusual Fire or Explosion Data:

All storage containers should be grounded and bonded. This product may ignite explosively by self-generated static electricity. Runoff to sewer may create fire or explosion hazard well downstream from the source. Vapors may travel along the ground or may be moved by ventilation and ignited by ignition sources at locations distant from material handling point.

Methanol: Reactivity Data

Stability: Stable

Hazardous Polymerization: Will not occur

Conditions to avoid / Incompatibility:

Strong oxidizing agents, heat, spark, flame and build-up of electricity. Flammable or toxic gases may accumulate in confined spaces. Runoff to sewer may result in creation of explosive conditions.

Hazardous Decomposition Products:

Burns to form Carbon oxides.

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Methanol: Health Hazard Data

Carcinogenicity: NTP: NO
IARC Monographs: NO
OSHA Regulated: NO

Occupational Exposure Limits:

OSHA Permissible Exposure Limit (PEL): 200 ppm (260 mg/m³), time weighted average (vapor in air) for an eight (8) hour work day.

ACGIH Short-term Exposure Limit (STEL): 250 ppm (310 mg/m³).

NIOSH Immediately Dangerous to Life and Health (IDLH): 25,000 ppm

Effects of Overexposure:

Acute:

Eyes: Liquid contact may cause stinging, redness, tearing and blurred vision. Vapor contact may cause moderate irritation.

Skin: Skin contact may irritate and result in dermatitis. Methanol can be absorbed through the skin and repeated or prolonged skin contact can produce symptoms similar to inhalation exposures.

Inhalation: Inhalation of vapor or mist may cause coughing, headache, dizziness, weakness, drowsiness, nausea, narcosis, visual impairment and respiratory failure.
Inhalation of high concentrations of vapors for prolonged periods has resulted in death. Liver damage has resulted from prolonged or repeated inhalation of vapors.

Ingestion: Methanol is a toxic chemical that cannot be made nonpoisonous. Death from ingestion of less than 30 ml has been reported. Usual fatal dose 100-250 ml. Ingestion may cause headache, fatigue, nausea, visual impairment or complete blindness, acidosis, convulsions, mydriasis, circulatory collapse, respiratory failure, death.

Chronic:

Methanol is a toxic chemical that CANNOT BE MADE NONPOISONOUS. Poisoning can occur from ingestion, inhalation or percutaneous absorption. Methanol may be fatal or cause blindness if swallowed.

Additional Medical and Toxicological Information:

Contact with full strength or even dilute formulations of this product or exposure above and/or below the TLV may aggravate pre-existing dermatitis or kidney disorders in certain individuals.

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Methanol: Emergency First Aid Procedures

- Eye contact:** If liquid contacts the eye, immediately flush the area with tepid water. Get medical attention, if discomfort persists, preferably an Ophthalmologist. Speed and thoroughness in rinsing eyes are important to avoid permanent injury.
- Skin Contact:** Remove contaminated clothing. Immediately wash affected areas with soap and water. Get medical attention immediately.
- Inhalation:** Remove to fresh air. Apply artificial respiration if not breathing. Keep person warm, quiet and get medical attention immediately.
- Ingestion:** If sufficient quantity is consumed blindness or death may result. Induce vomiting if victim is conscious. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim drink large amounts of water, milk, or sodium bicarbonate. Get medical attention immediately.

Methanol: Special Protection Information

- Eye Protection:** Remove contact lenses and wear chemical safety glasses or goggles where contact with liquid or mist may occur.
- Skin Protection:** Wear impervious gloves if prolonged contact with skin may occur. Wear appropriate protective clothing to avoid skin contact.
- Inhalation:** Use approved respiratory protective equipment in situations where airborne concentrations may exceed occupational exposure levels. Self-contained breathing apparatus should be available for non-routine and emergency use.
- Ventilation:** Provide adequate ventilation to prevent the formation of explosive atmospheres and prevent oxygen deficient atmospheres, especially in confined spaces.

Methanol: Spill or Leak

- Procedures:** Clean-up personnel should wear all applicable safety equipment. Remove sources of heat or ignition including internal combustion engines and power tools. No smoking, flares or flames in hazard area. Take up small spills with noncombustible absorbent material and place in containers for later disposal. Dike far ahead of large spills for later disposal. Do not flush to sewer or surface water. Ventilate area and prevent skin contact.

Consult DOT "Emergency Response Guidebook" - Guide 131

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Methanol: Waste Disposal

Procedure: Methanol contaminated soil will require disposal through a licensed waste disposal company. Follow federal, state and local regulations.

Methanol: Special Precautions and Comments

Storage Precautions: Store in tightly closed containers in a dry cool place, away from sources of heat or ignition. Ground and bond all transfer and storage equipment to prevent static sparks and equip with self closing valves, pressure vacuum bungs and flame arrestors. Empty containers may contain residue (liquid/vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition; they may explode and cause injury or death.

Methanol: EPA SARA Title III Information

EPCRA Section 311/312 Hazard Categorization:

Acute	Chronic	Fire	Pressure	Reactive
X		X		

EPCRA & CAA Hazardous Substances:

Ingredient	CAS No.	% / wt.	CAA 112(r)	302 TPQ lb.	304 RQ lb.	313 TRI
Methanol	67-56-1	>99	not listed		5,000	X

Key: CAA 112(r) = Toxic Substance with potential for airborne release
Sec. 302 TPQ = Extremely Hazardous Substances (EHS) Threshold Planning Quantity
Sec. 304 RQ = EHS and CERCLA Reportable Quantity if spilled
Sec. 313 TRI = Toxic Chemicals to be reported on Toxic Release Inventory if spilled

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Methanol: Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of this company's knowledge and believed accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made as to the accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

COASTAL CHEM, INC.
CHIEF CHEMIST & LABORATORY
MANAGER

Charles R. Barnhart, M.S.

DATE REVIEWED:

October 1, 2002