



FRANCIS DRILLING FLUIDS, LTD.

MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Trade Name(s): Methanol

Generic Name(s): Wood alcohol, carbinol

Chemical Name(s): Methyl alcohol Cas# 67-56-1

Francis Drilling Fluids, LTD.
P.O. Box 1694
Crowley, LA 70527-1694

Emergency/Telephone No.: 800-960-6610
337-783-8685
Hazardous Materials No.: 800-255-3924
Poison Control Center No.: 800-256-9822

II. HAZARDOUS INGREDIENTS

Ingredient	CAS No.	%	Hazard
Methanol	67-56-1	100	Toxic, flammable

III. NFPA/HMIS HAZARD IDENTIFICATION SYSTEM

0=LEAST 1=SLIGHT 2=MODERATE 3=HIGH 4 =EXTREME

Health: 1

Fire: 3

Reactivity: 0

IV. PHYSICAL DATA

Boiling Point (°F): 760 mm Hg: 64.7°C(148.5°F)

Specific Gravity (H₂O=1): 0.7922 @ 20/20C

Vapor Pressure (mm. Hg): @20°C 96mm Hg

Melting Point: ND

Vapor Density (Air = 1): 1.1

Evaporation Rate: (Butyl Acetate=1) 1.1

Solubility in Water: 100%

pH: ND

Density (at 20° C): ND

Odor: Characteristic odor

Appearance: Water-white liquid

METHANOL

V. FIRE AND EXPLOSION DATA

Flash Point: 52°F(11°C) TCC; 58°F(14°C) TOC

Flammable Limits: LEL: 6.0 UEL: 36.0

Special Fire Fighting Procedures: Use water spray to cool fire-exposed containers and structures. Approach methanol fire with caution; methanol burns with and almost invisible flame in daylight. Use self-contained breathing apparatus and protective clothing.

Unusual Fire and Explosion Hazards: Vapors form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from product handling point.

Extinguishing Media: Apply alcohol-type or all-purpose-type foams by manufacturer's recommended techniques for large fires. Use CO2 or dry chemical media for small fires.

VI. REACTIVITY

Stability: Stable

Hazardous Polymerization: Will not occur.

Incompatibility: Alkali metals, concentrated nitric and sulfuric acids, aldehydes, acyl chlorides.

Hazardous Decomposition: Burning can produce carbon monoxide and/or carbon dioxide.

VII. HEALTH HAZARD INFORMATION

Routes of Exposure and Effects:

Skin: Prolonged contact with the skin may cause reddening and defatting of the skin.

Eyes: Liquid may cause mild redness and swelling of the conjunctiva with transient superficial injury to the cornea.

Inhalation: May cause dizziness, drowsiness, disturbances of vision, and tingling numbness, and shooting pains in the hands and forearms.

Ingestion: Nausea, abdominal pain, vomiting, headache, dizziness, shortness of breath, weakness, fatigue, leg cramps, restlessness, confusion, drunken behavior, visual disturbances, drowsiness, coma and death. There may be a delay of several hours between swallowing methanol and the onset of signs and symptoms. The effects observed are in part due to acidosis and partially to cerebral edema. Visual effects include blurred vision, diplopia, changes in color, perception, restriction of visual fields, complete blindness. Ingestion of moderate quantities of methanol also produce metabolic acidosis. Onset of symptoms may be delayed up to 48 hours. 60-200ml is a fatal dose for most adults. Ingestion of as little as 10 ml has caused blindness. With massive overdoses, liver, kidney and heart muscle injury have been described.

Permissible Exposure Limits: (for air contaminants)

OSHA PEL (8hr. TWA): 200ppm - skin 250ppm STEL

ACGIH TLV: 200ppm - skin 250ppm STEL

Carcinogenicity:

Listed By NTP: Not listed

Listed By: IARC: Not listed

Listed By OSHA: Listed

Acute Oral LD50:

Acute Dermal LD50:

Aquatic Toxicology LC50:

Emergency and First Aid Procedures:

Skin: Remove contaminated clothing. Flush skin with water.

METHANOL

Eyes: Immediately flush eyes thoroughly with water and continue washing for several minutes. Obtain medical attention.

Ingestion: If patient in conscious and has gag reflex, give two glasses of water. Induce vomiting. Call a physician urgently. Administer ethanol (whiskey, brandy etc.) 30 ml every 3 hours, until medical assistance is obtained.

Inhalation: Remove to fresh air. Give artificial respiration if not breathing. Oxygen may be given by qualified personnel if breathing is difficult. Obtain medical attention.

Additional Health Hazard Information::

Notes to Physician: The combination of visual disturbances, metabolic acidosis, and formic acid in the urine is evidence of methanol poisoning. The therapeutics administration of ethanol (10ml per hour) allows it to be preferentially oxidized and reduces production of methanol metabolites. Acidosis must be treated by means of intravenous sodium bicarbonate, and methanol elimination may be increased by hemodialysis, as indicated. Treatment should be based on blood methanol levels and acid-base balance. Folates may be administered to enhance the metabolism of formaldehyde. 4-Methyl pyrazole has been suggested as an antidote: because of its alcohol dehydrogenase inhibiting effects, it reduces the production of formate and the development of metabolic acidosis. However, the value of this antidote remains to be proven in humans.

VIII. HANDLING AND USE PRECAUTIONS

Steps to be Taken if Material is Released or Spilled: Extinguish and do not turn on any ignition source until area is determined to be free from explosion or fire hazards. Wear suitable protective equipment. Small spills should be flushed with large quantities of water. Larger spills should be collected for disposal.

Waste Disposal Methods: Incinerate in a furnace where permitted under appropriate Federal, State and Local regulations.

Handling and Storage Precautions:

Danger! Flammable.

Harmful or fatal if swallowed.

May cause eye damage and blindness if swallowed.

Harmful if absorbed through skin.

Harmful if inhaled.

May cause dizziness and drowsiness.

May cause heart muscle damage.

Keep away from heat, sparks and flame.

Avoid contact with eyes, skin, and clothing.

Avoid breathing vapor.

Use with adequate ventilation.

Keep container closed.

Wash thoroughly after handling.

For Industry Use Only!

IX. INDUSTRIAL HYGIENE CONTROL MEASURES

Ventilation Requirements: This product should be confined within vapor-tight equipment, in which case general/mechanical room ventilation should be satisfactory. Special, local ventilation may be needed at points where vapors are expected to escape to the workplace air.

Respirator: Self-contained breathing apparatus in high vapor concentrations.

Eye Protection: Monogoggles

Gloves: Butyl or nitrile rubber gloves.

Other Protective Clothing or Equipment: Chemical apron, eye bath and safety shower.

X. SPECIAL PRECAUTIONS

Other Precautions: The reaction of methanol with nitric acid is considered hazardous not only because it is exothermic, but also because it produces methyl nitrate. Methyl nitrate reportedly can explode violently if shocked mechanically or heated. Disposal - At low concentrations in water, methanol is readily biodegradable in a biological wastewater treatment plant.

XI. ENVIRONMENTAL/SAFETY REGULATION

Status on Substance Lists:

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS"

Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQ) in 40 CFR 302.4.

Chemical	CAS Number	Upper Bound Concentration %
To be determined		

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQ) in 40 CFR 355 (used for SARA 302, 304, 311, and 312).

Components present in this product at a level which could require reporting under the statute are:

Chemical	CAS Number	Upper Bound Concentration%
To be determined		

Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDS's that are copied and distributed for this material.

Components present in this product at a level which could require reporting under the statute are:

Chemical	CAS Number	Upper Bound Concentration%
Methanol	67-56-1	100

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Toxic Substances Control Act (TSCA) Status:

The ingredients of this product are on the TSCA Inventory.

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California SCAQMD Rule 443.1 VOC's:

VOC 791 g/l; Vapor pressure 96 mm Hg @ 20 C

DEPARTMENT OF TRANSPORTATION

Shipping Name: Methanol, 3, UN1230, PG II	Hazard Class: 3
Hazardous Substance: RQ 5000	
Cautionary Labeling: Flammable Liquid, Poison	Placard: UN1230
NA=Not Applicable; ND=Not Determined or No Data	Date Prepared: July 28, 1995

File Name: Methanol

The data presented is true and correct to the best of our knowledge and belief; however, neither seller nor preparer make any warranties, express or implied, concerning the information presented. The user is cautioned to perform his own hazard evaluation and to rely upon his own determinations.

METHANOL