



MATERIAL SAFETY DATA SHEET

Methanol

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Chemical Name	:	Methanol
Chemical Formula	:	CH ₃ OH
CAS Number	:	67-56-1
Synonyms	:	Methyl alcohol, methyl hydrate, wood spirit, methyl hydroxide
General Use	:	Solvent, fuel, feedstock
Manufacturer's Name	:	Deepak Fertilisers and Petrochemicals Corprn. Ltd.
Address :	:	Plot K-1, MIDC Indl Area, Taloja A.V., Dist: Raigad
Telephone no. for info.	:	+91-022-67684000

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Composition	:	Methyl alcohol
ACGIH TLV	:	200ppm (TWA), 250ppm (STEL)

SECTION 3 - HAZARDS IDENTIFICATION

Primary Entry Routes	:	Inhalation, skin, eyes and ingestion
Acute Effects	:	Inhalation of high air born concentration can also irritate mucous membranes, cause headache, nausea, sleepiness, confusion, loss of consciousness, digestive and visual disturbances, and even death.
Carcinogenicity	:	Not available.
Chronic Effects	:	Repeated exposure by inhalation or absorption may cause systemic poisoning, brain disorders, impaired vision and blindness. Inhalation may worsen conditions such as emphysema or bronchitis. Repeated skin contact may cause dermal irritation, dryness and cracking.
NFPA rating	:	Health - 2; Fire - 3; Reactivity - 0

SECTION 4 - FIRST AID MESURES

Eyes	:	Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open. Cold water may be used. Get medical attention immediately.
Skin	:	Immediate flush skin with plenty of water at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Get medical attention immediately.
Inhalation	:	Remove affected person to fresh air. ;If not breathing, give artificial respiration. Get medical attention immediately.
Ingestion	:	Swallowing methanol is potentially life threatening. Onset of symptoms may be delayed for 18 to 24 hours after digestion. If conscious and medical aid is not immediately available, do not induce vomiting. Get medical attention.



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SECTION 5 - FIRE FIGHTING MEASURES

Flash point	:	11 °C
Flash point method	:	Closed cup
Auto ignition temp.	:	385 °C
L E L	:	6.00%
U E L	:	36.00%
Flammability classifn.	:	Flammable
Extinguishing media	:	Small fire: Dry Chemicals,Water spray. Large fire:AFFF(R)(Aqueous film forming foam(alcohol resistance)type with either a 3% or 6% foam proportioningsystem.
Hazardous combustion products	:	Toxic gases and vapours;oxides of carbon and formaldehyde .

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Small Spills	:	Soak up spill with non-combustible absorbent material. Recover methanol and dilute with water to reduce fire hazard. Prevent spilled methanol from entering sewers,confined spaces,drains ,or waterways. Restrict access to unprotected personnel.
Large Spills	:	If necessary,contain spill by diking. Fluorocarbon alcohol resistant foams may be applied to spill to diminish vapour and fire hazard. Maximize methanol recovery for recycling or reuse. Collect liquid with explosive proof pump.
Clean up	:	Wash the area with water.

SECTION 7 - HANDLING AND STORAGE

Handling Precautions	:	Keep away from heat,spark and flame & sources of ignition. Ground all equipment containing material. Do not breath gas fumes,vapor or spray. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents,metals,acids.
Storage Requirements	:	Store in a cool,well ventilated area away from sources of ignition. Store and handle in accordance with all current regulation and standards. Use explosion proof electrical equipment. Ensure proper electrical grounding procedure are in place.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls	:	Provide exhaust ventilation or other engineering control to keep the air born concentration of vapour below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Respiratory Protection	:	If exposure limit is exceeded, use respiratory protection
Protective Clothing /	:	Wear impervious protective clothing including boots, gloves, Splash goggles. Full Suit. Self contained breathing apparatus.
Equipment	:	Safety shower,Eye wash fountain.



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SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State	: Liquid
Appearance & Odour	: Clear, Colorless liquid with Mild characteristic alcohol odor
Vapor Pressure	: 12.8 kPa @20 °C
Specific Gravity	: 0.7915 (Water =1)
Water Solubility	: Easily soluble in cold and hot water.
Boiling Point	: 64.7 °C @101.3 kPa
Freezing Point	: (-)97.8 °C
Vapor Density	: 1.105 @ 15 °C
Critical Temperature	: 239.4 °C

SECTION 10 - STABILITY AND REACTIVITY

Stability	: Product is stable.
Chemical incompatibilities	: Reactive with oxidizing agents, metal, acids.
Conditions to Avoid	: Heat, flames, ignition sources.
Hazardous Decomposition product	: Formaldehyde, carbon dioxide, and carbon monoxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxic-Inhalation	: Hazardous in case of skin contact(irritant),of ingestion,of inhalation.
Chronic Effects	: Mutagenic for mammalian somatic cells, Mutagenic for bacteria and/or yeast. Passes through the placental barrier. May affect genetic material. May cause birth defects and adverse reproductive effects(Paternal and maternal effect and fetotoxicity)based on animal study.

SECTION 12 - ECOLOGICAL INFORMATION

Environmental toxicity	: Methanol in fresh or salt water may have serious effects on aquatic life. A study on methanol's toxic effect on sewage sludge bacteria reported little effect on digestion at 0.1% while 0.5% methanol retarded digestion. Methanol will be broken down into carbon dioxide and water.
Biodegradability	: Biodegrades easily in water.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal	: Waste must be disposed of in accordance with state and local environmental control regulations.
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SECTION - 14 - TRANSPORT INFORMATION

DOT Classification : CLASS 3 : Flammable liquid
Identification : Methanol, Methyl alcohol.
Special provisions for Transport : Not available.

SECTION 15 - REGULATORY INFORMATION

Methyl alcohol Illinois toxic substances, flammable liquid.

SECTION 16 - OTHER INFORMATION

Prepared by : Deepak Fertilisers and Petrochemicals Corporation Ltd.

Disclaimer : This MSDS and the information it contains is offered to you in good faith as accurate. We believe that information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individual and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents.

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