



# INTERNATIONAL METHANOL COMPANY

## MATERIAL SAFETY DATA SHEET METHANOL

### 1. PRODUCT MANUFACTURER INFORMATION

Product Name	Methanol (CH <sub>3</sub> OH)
Manufacturer	International Methanol Company (IMC) P O Box 12021 Post code 31961 Jubail Industrial City Kingdom of Saudi Arabia
Emergency Telephone No	00966-359 9985 (24 hours)
ID No	UN1230
Company (affiliate) website	<a href="http://sipchem.com/en/affiliates.htm">http://sipchem.com/en/affiliates.htm</a>

### 2. HAZARDOUS COMPONENTS

Methyl Alcohol	99.985%	67-56-1
Trace Impurities:	(IMCA Grade AA): Acetone and aldehydes < 30 ppm, acetic acid Max.30mg/kg, Appearance Clear and free of suspended matter, Colour, Pt-Co scale, Max.5, Distillation range at 760 mmHg Range 1°C, and shall include the temp of 64.6°C, Ethanol(%w/w) Max.50mg/kg, Non-volatile matter Max.8mg/kg, Specific gravity at20°C/ 20°C 0.971 to 0.973, Water(%w/w) Max.0.1, Purity Min.99.85, Chloride(ppm w/w) Max.0.5, Sulphur (ppm w/w) Max.0.5, Hydrocarbons pass test, Total iron (ppm w/w) Max0.1mg/kg.	

### 3. PRODUCT INFORMATION

Product Name	METHANOL (CH <sub>3</sub> OH)
Trade Name/Synonyms	Methyl alcohol, wood alcohol, methyl hydroxide, carbinol
U.N. Number	1230
Product Use	Industrial solvent, fuel, feedstock for organic synthesis, gasoline octane booster

### 4. FIRST AID INFORMATION

Skin	Remove contaminated clothing; wash under shower with soap and water for 15 minutes. Seek medical attention if irritation occurs.
Eye	Flush eyes immediately with gently running water for 15 minutes, obtain medical attention.
Inhalation	Remove to fresh air, restore or assist breathing if necessary, obtain medical attention immediately.
Ingestion	Swallowing methanol is life threatening. Onset of symptoms may be delayed for 18 to 24 hours after ingestion. Transport to medical attention.

### POTENTIAL HEALTH EFFECTS

Target Organs	Eyes, skin, central nervous system (CNS), gastrointestinal (GI) tract, respiratory system.
Entry Routes	Inhalation, ingestion, skin and/or eye contact/absorption
Inhalation	At low concentrations may cause respiratory irritation, breathing difficulty, headache, vomiting, visual disturbance, and at high concentrations, CNS damage, convulsions, circulatory collapse, respiratory failure, coma and blindness can result from inhalation of methanol vapor. 50,000 ppm can be fatal within 1-2 hrs.
Eye:	Contact with liquid may result in irritation, and superficial lesions.
Skin:	Contact may cause irritation, dermatitis and swelling.



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<b>Ingestion:</b>	Ingestion of as little as 15 ml cause blindness, higher doses may cause death. Effects of lower doses may be nausea, headache, abdominal pain, vomiting and visual disturbances ranging from blurred vision to light sensitivity.
<b>Exposure Limits</b>	Dermal OSHA PEL-TWA = 200 ppm, STEL = 250 ppm Dermal ACGIH TLV-TWA = 200 ppm, STEL = 250 ppm NIOSH IDLH Level 6000 ppm
<b>Long Term Effects</b>	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 irritation, dryness and cracking.
<b>Teratogenicity</b>	No
<b>Mutagenicity</b>	No
<b>Carcinogenicity</b>	No

#### 5. FIRE FIGHTING MEASURES

<b>Fire hazards</b>	Methanol can form explosive mixtures in the air, vapors of methanol may travel to distant sources of ignition and flash back to the material source. Hazardous by-products of combustion include toxic gases and vapors, oxides of carbon and formaldehyde.
<b>Fire-Fighting</b>	Do not use water any more than needed to extinguish fire. Fire fighters must wear full face, positive pressure, self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode. Do not discharge firewater run off to sewers or waterways

#### 6. ACCIDENTAL RELEASE MESURES

<b>Flash Point</b>	12 °C, Closed Cup
<b>Auto ignition</b>	464 °C
<b>Explosive Limit</b>	LEL: 6.0% v/v to UEL: 36% v/v
<b>Extinguishing Media</b>	For small fires use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Use water spray to cool fire-exposed containers. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with water until fire are out.

#### 7. HANDLING AND STORAGE

<b>Storage</b>	Storage tanks should preferably be constructed of mild steel. Tanks must be grounded and vented and should be nitrogen blanketed.
<b>Handling</b>	No smoking or open flame in storage, or handling areas. Use explosion proof electrical equipment and ensure proper electrical grounding.

#### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Engineering Controls</b>	In confined areas, local and general ventilation should be provided to maintain airborne concentrations below permissible exposure limits.
<b>Gloves</b>	Butyl and nitrile rubbers are recommended.
<b>Respiratory</b>	Use NIOSH approved supplied air respirator when airborne concentrations exceed



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**Eye** exposure limits. Follow the OSHA respirator regulations in 29CFR 1910.134  
Wear appropriate protective eyeglasses or chemical safety goggles as described  
by OSHA's eye and face protection regulations in 29 CFR 1910.133

**Clothing** Wear chemical resistant clothing, preferably butyl or nitrile rubber.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State** Liquid with slight alcohol odor  
**Appearance** Clear, colourless  
**Specific Gravity** 0.791 to 0.793  
**Freezing Point** -98 °C  
**Boiling Point** 64.5 °C at 760 mm Hg  
**Vapour Pressure kPa** 96 mm Hg at 20 deg C  
**Vapour Density (air=1)** 1.10  
**Molecular Weight** 32.04  
**Volatility % v/v** 100%

#### 10. STABILITY AND REACTIVITY

**Methanol** Yes  
**Incompatible with** Strong oxidizers, strong acids, strong bases.  
**Conditions of Reactivity** Presence of incompatible materials and ignition sources.

#### 11. TOXICOLOGICAL INFORMATION

**Methanol** LD50 Oral Rat: 9100 mg/kg  
LD50 Skin Rabbit: 15,940 mg/kg  
LD50 Inhalation Rat: 145,000 ppm1h

#### 12. ECOLOGICAL INFORMATION

**Methanol** TLM 96: >1000 ppm

#### 13. DISPOSAL CONSIDERATIONS

**Spill** Any spill can be a potential fire or explosion hazard. Eliminate all ignition sources, stop spill and use absorbent materials for cleanup. Fluorocarbon water foams may be applied to spill to diminish vapour and fire hazard. Do not touch or walk through spilled material. Small spills may be absorbed with earth, sand, or pillows, diking may be necessary for larger spills. Prevent spill entry into waterways, sewers, or confined spaces. Use non-sparking tools for cleanup.

**Disposal** Follow applicable international, country and local regulations.

#### 14. TRANSPORT INFORMATION

**Shipping Name** Methanol  
**Hazard Class** 3  
**ID No** UN1230  
**Packing Group** II





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Label FLAMMABLE LIQUID  
NFPA Rating Health = 1, Fire = 3, Reactivity = 0

#### 15. REGULATORY INFORMATION

Regulations vary from country to country. Anyone who uses, transports or stores this product, should refer to country specific regulations. Following are a few sample regulations for reference only:

**EPA SARA 311/312** Acute health, chronic health, fire hazard

**EPA SARA 311/312** This product contains the following chemicals subject to annual release reporting Requirements under SARA Title 111, Section 313 (40 CFR 372):  
Methanol 67-56-1 30-40%

#### PROTECTION OF STRATOSPHERIC OZONE

This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

#### CERCLA SECTION 103

Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for the product, based on the RQ for Methanol (40% maximum) of 5,000 lbs, is 12,500 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

#### CALIFORNIA PROPOSITION 65

This product does not contain chemicals regulated under California Proposition 65.

#### EPA TSCA INVENTORY

All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

#### EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS)

All of the ingredients are listed on the EINECS inventory.

#### AUSTRALIA

All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances.

#### 16. OTHER INFORMATION

The information and recommendations herein are taken from data contained in independent, industry recognized references. Although reasonable care has been taken in the preparation of the information herein, Sipchem and International Methanol Co. make no guarantee, warranty (express or implied) or other representation and assume no responsibility as to the accuracy or suitability of such information for application of the information, since conditions of its use are beyond control of these companies. Sipchem and International Methanol Co shall not bear any liability whatsoever for any loss or damage incurred in connection with the use of this substance.