



# SAFETY DATA SHEET

## METHANOL

### 1.IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: METHANOL

Recommended use: Chemical for industry.

Manufacturer/Supplier: **MODERN CHEMICAL CO.,LTD.**  
82/80 Soi Ekamai 22 (Nuannoi), Sukhumvit 63,  
Klong Tan Nuea, Watthana, Bangkok 10110

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### 2. HAZARDS IDENTIFICATION

#### Label elements

Pictogram



Signal word

Danger

#### Hazard statement(s):

- 1.) Highly flammable liquid and vapour.
- 2.) Fatal if swallowed.
- 3.) May damage fertility or the unborn child (fetotoxic and teratogenic effects).
- 4.) May cause damage to eyes and central nervous system if ingested or inhaled.
- 5.) Cause eye irritation. Aspiration Hazard.
- 6.) Swallowing or vomiting of the liquid may result in aspiration into the lungs.
- 7.) Causes serious eye irritation.
- 8.) Causes damage to organs Central Nervous System, respiratory, visible organs.
- 9.) Causes damage to organs Central Nervous System, visible organs through prolonged or repeated exposure.



- 10.) Causes damage to organs.
- 11.) Toxic if swallowed, in contact with skin or if inhaled

**Precautionary statement(s):**

- 1.) Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- 2.) Keep container tightly closed.
- 3.) Ground/bond container and receiving equipment.
- 4.) Use explosion-proof electrical ventilating, and lighting equipment.
- 5.) Use only non-sparking tools.
- 6.) Take precautionary measures against static discharge.
- 7.) Do not breathe dust/fume/gas/mist/vapours/spray.
- 8.) Wash skin thoroughly after handling.
- 9.) Do not eat, drink or smoke when using this product.
- 10.) Use only outdoors or in a well-ventilated area.
- 11.) Wear protective gloves/protective clothing/eye protection/face protection.
- 12.) IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- 13.) IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- 14.) IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- 15.) IF exposed: Call a POISON CENTER or doctor/physician.
- 16.) Wash contaminated clothing before reuse.
- 17.) In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
- 18.) Store in a well-ventilated place. Keep container tightly closed. Keep cool.
- 19.) Store locked up.
- 20.) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse Mouth. Do NOT induce vomiting.
- 21.) Avoid contact with eyes, skin and clothing. Wash thoroughly after handling
- 22.) Dispose of contents and container in accordance with local regulational/national/international regulations

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Synonym:** Methyl alcohol, carbinol, wood alcohol, Methyl hydroxide, Monohydroxymethane, Columbian spirits, Pyroxylic spirit, Methyl hydroxide, Wood naphtha, Wood spirit, Methyl hydrate.

Ingredients	% (w/w)	CAS NO.
METHANOL	100	67-56-1



#### 4. FIRST AID MEASURES

**General advice:**

Move out of dangerous are. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended. Consult a medical doctor.

**Inhalation:**

Remove victim to fresh air. If cough or other respiratory symptoms develop, get medical attention. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Skin contact:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical aid immediately.

**Eye contact:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

**Ingestion:**

**Do not induce vomiting.** Keep respiratory tract clear. Do NOT give milk or alcoholic beverages. Never give anything by mouth to an unconscious person and call a medical doctor.

#### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:**

Use water spray, foam, dry chemical or carbon dioxide.

**Unsuitable Extinguishing Media:**

High volume water jet.

**Specific hazards arising from Chemicals:**

Highly Flammable and Toxic. When vapour is heavier than the air, vapors may form explosive mixture with air.

Vapour may travel considerable distance to source of ignition and flash back. During a fire, carbon monoxide, carbon dioxide and irritating and toxic gases such as formaldehyde may be generated.

**Special protective equipment for fire-fighters:**

Wear self-contained breathings apparatus. Wear protective Clothing and safety glasses to prevent contacting with skin or eyes.



## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions:

Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Use personal protective equipment. Ensure adequate ventilation.

### Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.

### Methods and Material for Containment and Clean Up:

Wear chemical protective suit with mask organic gaseous and vapours. Contain spillage into containers. Absorb with sand, soil or inert substances. Store in a sealed container. Use non-sparking tools and place them in an open area. Do not touch chemicals. Sprinkle with water to reduce vapours. Ventilate the area and clean up affected area. After the substance is removed.

## 7. HANDLING AND STORAGE

### Precautions for Safe Handling & Product Transfer:

Avoid contact with the substance. Use only in well-ventilated areas. Do not use in confined areas. Static protection. Do not allow the flames and sparks.

### Conditions for Safe Storage & Unsuitable Materials:

Keep container tightly. Keep away from strong oxidants acid alkaline, must be stored in the original container. Store in well-ventilated place, dry and cool place. Prevent heat and light.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational Exposure Limits:** TVL - TWA 200 ppm, TVL - STEL 250 ppm

### Appropriate Engineering Controls:

Use explosion-proof ventilation equipment in confined areas. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.



## Individual Protection Measures

<b>Respiratory protection:</b>	In the case of vapour formation use a respirator with an approved filter.
<b>Hand protection:</b>	Wear butyl rubber gloves.
<b>Eye protection:</b>	Face shield and chemical splash goggles.
<b>Skin and body protections:</b>	Chemical resistant apron and/or clothing.
<b>Hygiene measures:</b>	Remove contaminated clothing. Wash hands and face after working with substance, before eating or smoking at workplace. Do not eat/drink smoke at work.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form, Color and Odor :</b> liquid, colorless, Alcohol-like	<b>Evaporation rate :</b> 4.1 (n-butyl acetate = 1)
<b>Melting Point :</b> (-98) – (-97.8)°C	<b>Specific gravity :</b> 0.791 - 0.793 g/cm <sup>3</sup> at 20 °C
<b>pH :</b> N/A	<b>Solubility in water :</b> Soluble
<b>Boiling point :</b> 64.6 - 65 °C	<b>Viscosity :</b> 0.55 cP at 20 °C
<b>Vapour pressure :</b> 96 - 128 mmHg at 20 °C	<b>Vapour density :</b> 1.105 at 15 °C
<b>Lower explosion limits :</b> 5.5 - 6.0 %Vol	<b>Upper explosive limit :</b> 31 - 50 %Vol
<b>Auto-ignition temperature :</b> 455 - 464 °C	<b>Flash point :</b> 9 – 12 °C
<b>Odour threshold :</b> 4.2 - 5960 ppm	<b>Flammability (solid, gas) :</b> N/A
<b>Decomposition temperature:</b> N/A	<b>Solubility in other solvents:</b> ethanol, benzene, other alcohols, chloroform, diethyl ether, other ethers, esters, ketone and most organic solvents.
<b>n-octanol/water partition coefficient (log P<sub>ow</sub>):</b> -0.82 /-0.66	

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under normal conditions.
<b>Reactions:</b>	Reacts violently with oxidizing agent, causing fire and explosion hazard. Hazardous polymerization does not occur.
<b>Possibility of Hazardous Reactions:</b>	Avoid contact with strong oxidizers, strong mineral or organic acids and strong bases. Contact with these materials may cause a violent or explosive reaction.



<b>Conditions to avoid:</b>	Avoid high temperature, ignition sources, sparks, confined spaces, heat, flame, build-up of static electricity, hot surface.
<b>Materials to avoid:</b>	Strong oxidizing, strong acid, acid chloride, acid anhydride, alkali metals, reducing agent, potassium, sodium, metals as powders, powdered aluminum, powdered magnesium, alkyl aluminum salt, acetyl bromide, chloroform + sodium hydroxide, cyanuric chloride, nitric acid.
<b>Hazardous decomposition products:</b>	Carbon monoxide, carbon dioxide, formaldehyde, fumes, smoke, gases and possible unburned methanol.

## 11. TOXICOLOGICAL INFORMATION

<b>Acute toxicity:</b>	LC50 (Inhalation, rat): 128 - 64000 mg/l-4h LD50 (Oral, rat): 5600 - 5628 mg/kg LD50 (Dermal, rabbit): 15800 mg/kg LDL0 (Oral, human): 143-428 mg/kg
<b>Sensitization:</b>	After inhalation of vapors; cough, headache, nausea, tired. After skin contact: skin redness. After eye contact: irritations, conjunctivitis and eye inflection blurry. After swallowing: nausea, headache and vomit. Symptoms appear: headache, tired, confused powerless, sleepiness. Acute impact: Central nervous system is cause seizures, headache, unconscious, increase respiratory rate, failure to breathe, powerless, eye inflection blurry, eye pain, fear of light can cause blindness.
<b>Chronic toxicity:</b>	In humans, there is a visual impairment that can cause blindness and death. Affects the central nervous system, numb, insomnia, sleepless. In pregnant women, there are abnormalities in the formation of organs in the spine, neck, urinary tract or the infant circulatory system. There is an increase in embryonic death and bone disorders lower embryo weight. Abnormal embryo formation is characterized by brain inflammation, swelling and limb dysfunction. Impact on the creation of sperm.
<b>Fuether toxicological information:</b>	No data available.



## 12. ECOLOGICAL INFORMATION

### Toxicity

Toxicity to fish:	LC50 - Bluegill sunfish: 15400 mg/l-96h LC50 - Fathead Minnow: 29400 mg/L-96h LC50 - Rainbow trout: 8000 mg/L-48h
Toxicity to daphnia and other aquatic invertebrates:	EC50 - Daphnia magna(Crustacea): 22200 - 24500 mg/l-48h EC50 - Daphnia magna(Water flea): 18260 mg/l
Toxicity to algae:	EC50 - Green algae: 22000 mg/l-96h
Toxicity to Bacterial:	EC50 - Phylobacterium phosphoreum: 51000-320000 mg/l-30min IC50 - Activated sludge: >1000 mg/l
Biodegradability Remarks:	Biodegradation is fast.
Bioaccumulative Potential:	Do not cause bioaccumulation [BCF less than 10 and log P(o/w) = -0.71].
Mobility:	Has good mobility in the soil. No accumulation in soil.
Affected in any other way:	No data available.

## 13. DISPOSAL CONSIDERATIONS

<b>Material Disposal:</b>	Do not dispose of water into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company. Observe local laws and regulations.
<b>Container Disposal:</b>	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on the empty drum. Dispose of in accordance with official regulations.

## 14. TRANSPORT INFORMATION

### ADR/ADNR

UN-NO: 1230	Class: 3(6.1)	Packing group: II
Proper shipping name: METHANOL		

### IMGD

UN-NO: 1230	Class: 3(6.1)	Packing group: II
EMS: F-E S-D	Marine pollutant: No	



Proper shipping name: METHANOL

**IATA**

UN-NO: 1230

Class: 3(6.1)

Packing group: II

Proper shipping group: METHANOL

**15. REGULATORY INFORMATION**

**CANADIAN FEDERAL REGULATIONS:**

**CEPA, DOMESTIC SUBSTANCES LIST:**

Listed (Canadian Environmental Protection Act (CEPA) Schedule I)

**WHMIS CLASSIFICATION:**

B2, D1B, D2A, D2B

**UNITED STATES REGULATIONS:**

29CFR 1910.1200 (OSHA):

Hazardous

40CFR 116-117 (EPA):

Hazardous

40CFR 355 Appendices A and B:

Subject to Emergency Planning and Notification

40CFR 372 (SARA Title III):

Listed

40CFR 302 (CERCLA):

Listed

Toxic Substances Control ACT (TSCA):

Listed in the inventory

**Safety, health, and environmental regulations specific for the hazardous chemical**

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals)

Regulations 2013.

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health)

Regulations 2000.

**The components of this product are reported in the following inventories:**

CH INV : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory.

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or In compliance with the inventory.





NZloC	:	On the inventory, or In compliance with the inventory.
ENCS	:	On the inventory, or In compliance with the inventory.
ISHL	:	On the inventory, or In compliance with the inventory.
KECI	:	On the inventory, or In compliance with the inventory.
PICCS	:	On the inventory, or In compliance with the inventory.
IECSC	:	On the inventory, or In compliance with the inventory.

## US FEDERAL

Toxic Substances Control Act (TSCA):	Listed on the TSCA inventory.
Health&Safety Reporting List:	Not listed in the Health & Safety Reporting List
Chemical Test Rules	None of the chemicals in this product are under a Chemical Test Rule.
Section 12b:	None of the chemicals are listed under TSCA Section 12b.
CERCLA Hazardous Substances and corresponding RQs	Reportable Quantity (RQ) 5000 lb (2270 kg)
Superfund Amendment and Reauthorization Act (SARA)	
SARA Codes Section 302 Extremely Hazardous Substances	None of the chemicals in this product have a Threshold Planning Quantity (TPQ)
SARA Codes	Immediate, fire.
Section 313	This material contains Methanol which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.
Clean Air Act (CAA):	Listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depletors This material does not contain any Class 2 Ozone depletors.
Clean Water Act (CWA):	- None of the chemicals in this product are listed as Hazardous Substances under the CWA - None of the chemicals in this product are listed as Priority Pollutants under the CWA. - None of the chemicals in this product are listed as Toxic Poilutants under the CWA.
OSHA:	None of the chemicals in this product are considered highly hazardous by OSHA.



## European/International Regulations

### European Labeling in Accordance with EC Directives

Hazard Symbols:	- T F
Risk Phrases:	- R 11 Highly flammable. - R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed. - R 39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
Safety Phrases:	- S 16 Keep away from sources of ignition No smoking. - S 36/37 Wear suitable protective clothing and gloves. - S 45 In case of accident or if you feel unwell, seek medical advice immediately(show the label where possible). - S 7 Keep container tightly closed.
WGK (Water Danger/Protection)	Low Danger to Water (1)
Canada DSL/NDSL	Listed on Canada's DSL List.
Canada-WHMIS:	This product has a WHMIS classification of B2, D1B, D2B. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the regulations.
Canadian Ingredient Disclosure List:	Listed on the Canadian Ingredient Disclosure List.

## 16. Other Information

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