



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
Telephone No:	0-2715-0897-9, 0-2392-3410-3
Fax No:	0-2715-0908-9, 0-2391-1571-2
Emergency Telephone No:	0-2715-0897-9, 0-2392-3410-3

2. HAZARDS IDENTIFICATION

Label elements

Pictogram



Signal word

Danger

Hazard statement(s)

- 1.) Highly flammable liquid and vapour.
- 2.) Causes skin irritation.
- 3.) May be fatal if swallowed and enters airways.
- 4.) May cause drowsiness or dizziness.
- 5.) Toxic to aquatic life with long lasting effects.
- 6.) May damage the unborn child. Suspected of damaging fertility.

Precautionary statement(s)

- 1.) Keep away from heat/sparks/open flames/hot surfaces. - No smoking.



- 2.) Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- 3.) Avoid release to the environment.
- 4.) IF SWALLOWED: call a doctor/physician. Do NOT induce vomiting.
- 5.) IF IN EYES: Rinse cautiously with water for 15 minutes.
- 6.) IF ON SKIN Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonym: Methyl alcohol, carbinol, wood alcohol

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

4. FIRST AID MEASURES

General advice:

Show this safety data sheet to the doctor in attendance.

Inhalation:

Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose.

Skin contact:

Remove contaminated clothing and wash affected skin with soap and water. If signs of poisoning appear, treat as for inhalation. Wash contaminated clothing before reuse. Contaminated combustible material, e.g. clothing ignites more readily and burns fiercely.

Eye contact:

If substance has got into the eyes, immediately wash out with plenty of water for at least 15 minutes. Obtain medical attention.

Ingestion:

Rinse mouth. **Do not induce vomiting.** Keep patient warm, In case of shortness of breath, give oxygen. Apply respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:

Use water spray, alcohol – resistant foam, dry chemical or carbon dioxide.



Unsuitable Extinguishing Media:

Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from Chemicals:

Vapors may form explosive mixture with air. Flash back possible over considerable distance.

Special protective equipment for fire-fighters:

Wear self contained breathing apparatus for fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Evacuate personnel to safe areas. Do not breathe vapors or spray mist.

Remove all sources of ignition. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

Environmental precautions:

Contain or absorb leaking liquid with sand or earth, consults an expert.

Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil or vegetation, advise police.

Methods and Material for Containment and Clean Up:

Spillage: May react with combustible substances creating fire or explosion hazard and formation of toxic fumes. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Soak up with inert absorbent material (e.g. sand, silicagel). Prevent liquid entering sewers, basements and workpits; vapor may create explosive atmosphere. Transfer to covered steel drums. Dispose of promptly.

7. HANDLING AND STORAGE

Precautions for Safe Handling & Product Transfer:

Keep container tightly closed. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Do not empty into drains.

Conditions for Safe Storage & Unsuitable Materials:

Keep tightly closed at room temperature in a dry, cool and well ventilated place. Keep away from heat and sources of ignition. Keep out of direct sunlight and away from incompatible material. Store in original container. Electrical equipment should be protected to the appropriate standard.



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: TWA 260 mg/m³ , STEL 333 mg/m³.

Appropriate Engineering Controls: The product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Ventilation hoods and fans required when working with organic solvents or in hot melt applications.

Individual Protection Measures

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment. Equipment when vapor/aerosols are generated filter AX (EN 371)

Hand protection: Handle with gloves. In case full contact and splash contact wear gloves from butyl rubber material. The select protective gloves have to satisfy the specifications of EU

Directive 89/686 EEC and standard EN 374 derived from it.

Eye protection: Goggles giving complete protection to eyes.

Skin and body protections: Chemical resistant apron / flame retardant antistatic protective clothing, heavy duty work shoes.

Hygiene measures: Ventilation hoods and fans required when working with organic solvents or in hot melt applications. Keep working clothes separately. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form, Color and Odor : liquid, colorless, Characteristic	Evaporation rate : 610 (n-BU Acetate = 100)
Melting Point : -98 °C	Specific gravity : 0.7920 -0.7930 g/cm ³ at 20 °C
pH : N/A	Solubility in water : Soluble
Boiling point: 64-66 °C	Viscosity : 0.597 mPa.s at 20 °C
Vapour pressure : 97.68 mbar at 20 °C	Vapour density : 0.79 g/l
Lower explosion limits: 6.0 %Vol	Upper explosive limit: 36.5 %Vol
Auto-ignition temperature: 464 °C	Flash point: 12°C
Odour threshold: N/A	Flammability (solid, gas): N/A
Decomposition temperature: N/A	Solubility in other solvents: N/A
n-octanol/water partition coefficient (log P_{ow}): N/A	



10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under recommended storage conditions.
Reactions:	Hygroscopic. Highly flammable, unsuitable working materials: Various plastics, aluminium, zinc alloys. Explosible with air in a vaporous/gaseous state.
Possibility of Hazardous Reactions:	No data available
Conditions to avoid:	Heat, flames and sparks.
Materials to avoid:	Acid halides, alkali metals, alkaline earth metals, oxidizing agent, perchloric acid, perchlorates, salts of oxyhalogenic acids, CrO ₃ , halogen oxide, nitric acid, nitrogen oxides, nonmetallic oxides, chromosulfuric acid, hydrides, zinc diethyl, halogens.
Hazardous decomposition products:	Carbon monoxides, Carbon dioxides, (Hazardous decomposition products from under fire condition).

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	LC50 Inhalation- rat – 85.26 mg/l/4h LD50 Oral – rat – 5628 mg/kg. LDL0 oral – human– 143 mg/kg
Sensitization:	After inhalation of vapors; Irritation symptoms in the respiratory tract. After skin contact; slow absorption After eye contact; Slight irritations, mucosal irritations. After swallowing; Absorption. after absorption : Nausea , vomiting, headache, dizziness, inebriation, impaired vision, blindness (Irreversible damage of the optical nerve) Systemic effects: acidosis, drop in blood pressure, agitation, spasms, narcosis, coma. Symptoms may occur after a latency period has elapsed.
Chronic toxicity:	Noncarcinogenic in animal experiments. Bacterial mutagenicity Salmonella typhimurium is negative.
Further toxicological information	The product should be handled with care usual when dealing with chemical.



12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish: LC50- *Lepomis macrochirus*:15400 mg/l- 96 h

Toxicity to daphnia and other aquatic invertebrates:IC50 - *Daphnia magna* >10000 mg/l/48h

Toxicity to algae: IC50 - *Sc.quadricauda*: 8000 mg/l/8d

Toxicity to Bacterial: EC5 - *Ps Putida* 6600 mg/l/16d

Biodegradability Remarks: According to the results of tests of biodegradability this product is considered as being readily biodegradable.

Bioaccumulative Potential: No data available

Mobility: No data available

Affected in any other way: No data available

13. DISPOSAL CONSIDERATIONS

Material Disposal: There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Container Disposal: Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

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

GHS-Labeling

Hazard statement (s):

H225: Highly flammable liquid and vapor.

H331: Toxic if inhaled.

H311: Toxic in contact with skin.

H301: Toxic if swallowed.

H370: Causes damage to organs.

Precautionary statement(s)

P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

P240: Ground/bond container and receiving equipment.

P241: Use explosion-proof electrical/ventilating/lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P260: Do not breathe vapors.

P264: Wash hand thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P361: Remove/Take off immediately all contaminated clothing.

P301 + P363: Wash contaminated clothing before reuse.

P271: Use only outdoors or in a well-ventilated area.

P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.



P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P370 + P378: In case of fire: Use carbon dioxide, dry chemical or foam for extinction.

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P403 + P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

R - phrase(s):

R11: Highly flammable.

R23/24/25: Toxic by inhalation, in contact with skin and if swallowed

R39/23/24/25: Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and gloves.

S - phrase(s):

S 7: Keep container tightly closed.

S16: Keep away from sources of ignition. - No smoking.

S36/37: Wear suitable protective clothing and gloves.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

16. Other Information

Modern Chemical Co.,Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensive or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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