



Mitsubishi Gas Chemical America, Inc

Safety Data Sheet



Distributed by:
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Product: Methanol

Date: July 1, 2013

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SECTION 1 - IDENTIFICATION

SDS REVISION #: 007

PRODUCT IDENTIFIER: Methanol

OTHER IDENTIFIERS: Methyl alcohol; Wood alcohol; Carbinol; Methyl hydroxide, Methyl hydrate

CHEMICAL FORMULA: CH₃OH

RECOMMENDED USE: Industrial solvent and chemical intermediate

DISTRIBUTED BY: Mitsubishi Gas Chemical America, Inc.
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CHEMTREC - (800) 424-9300 (transportation emergencies)

SECTION 2 - HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Flammable liquids (Category 2)
 Acute toxicity, Oral (Category 3)
 Acute toxicity, Inhalation (Category 3)
 Acute toxicity, Dermal (Category 3)
 Specific target organ toxicity - single exposure (Category 1)



SIGNAL WORD:

Danger!

HAZARD STATEMENTS:

Toxic if swallowed, inhaled or in contact with skin. Causes damage to organs, including liver, kidneys and eyes. Highly flammable liquid and vapor.

PRECAUTIONARY STATEMENTS:

Prevention

Avoid breathing mist, vapors or spray. Use only outdoors or in a well-ventilated area. Wear protective clothing, gloves and eye and face protection. Wash exposed areas thoroughly after handling. Do not eat, drink or smoke when using this product. Do not eat, drink or smoke when using this product.

Keep away from heat/sparks/open flames/hot surfaces – No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/eye protection/face protection.

Section 2 continued on next page



SECTION 2 - HAZARDS IDENTIFICATION (continued)

PRECAUTIONARY STATEMENTS (continued):

Response

If on skin (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with shower/water and wash with plenty of soap and water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If swallowed: Rinse mouth. If exposed, or if you feel unwell: Call a poison center/doctor. In case of fire: Use water fog, alcohol-resistant foam, dry chemical or carbon dioxide.

Storage

Store locked up, in a well-ventilated place. Keep container tightly closed and cool.

Disposal

Dispose of container in accordance with all applicable regulations. This product, if disposed of, is considered a hazardous waste.

HAZARDS NOT OTHERWISE CLASSIFIED: None

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component</u>	<u>%</u>	<u>CAS No.</u>
Methanol	100	67-56-1

SECTION 4 - FIRST AID MEASURES

IN CASE OF EYE CONTACT:

Immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Remove contact lenses, if present and easy to do.

IN CASE OF SKIN CONTACT:

Wash exposed area with lots of soap and water. Remove contaminated clothing and launder before re-use.

IF SWALLOWED:

Rinse mouth and drink two large glasses of water. Induce vomiting by giving IPECAC syrup or by sticking finger to back of throat. Keep head below hips to avoid aspiration of material into lungs. Never give anything by mouth to an unconscious person. Get immediate medical attention.

IF INHALED:

If affected, move to fresh air. If breathing has stopped, give artificial respiration and call a physician.

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SECTION 4 - FIRST AID MEASURES (continued)

MOST IMPORTANT SYMPTOMS AND EFFECTS:

Toxic by inhalation, if swallowed, and by skin contact. Irreversible effects, such as blindness may occur.

NOTES TO PHYSICIAN:

Effects may be delayed. Administration of ethanol may inhibit metabolism.

SECTION 5 - FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

This material is a flammable liquid. Vapors are heavier than air, and may travel along the ground to remote ignition sources. Vapors may then ignite explosively.



This material meets the NFPA definition of a Class IB – flammable liquid.

EXTINGUISHING MEDIA:

Use dry chemical, carbon dioxide, water fog or alcohol foam. Cool containers with water. Water may be ineffective against large spills of flammable liquids.

PROTECTION OF FIREFIGHTERS:

Keep personnel removed from and upwind. Wear full protective clothing and self-contained breathing apparatus with full face-piece. Decomposition/combustion products may include carbon monoxide and carbon dioxide.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PRECAUTIONS, PROTECTIVE EQUIPMENT & EMERGENCY PROCEDURES:

Eliminate all open flames, heat, sparks and other ignition sources from the area of the spill. Use only explosion-proof equipment. Persons not wearing protective equipment should be excluded from the area of the spill until cleanup has been completed.

CONTAINMENT & CLEAN-UP:

Dike area of spill with sand or dirt to prevent spreading. Pump liquid to salvage tank or other containers. Remaining liquid may be absorbed on vermiculite or other absorbent material and shoveled into containers.

EPA has designated methanol as a hazardous substance with an RQ of 5000 pounds. Reporting spills of this material to the National Response Center at (800) 424-8802 may be required.



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SECTION 7 - HANDLING AND STORAGE

SAFE HANDLING:

When transferring product from containers, protect against static discharge in accordance with NFPA 77 Part 7.13. Use non-sparking tools and explosion-proof equipment when handling flammable liquids. Vapors are heavier than air and may travel along the ground to remote ignition sources. Vapors may then ignite explosively.

Avoid contact with skin, eyes and clothing. Avoid inhalation of vapors. Wash thoroughly after handling.

STORAGE:

Keep in closed or covered containers away from heat, sparks and open flames when not in use. Do not store near oxidizing materials. Store in cool dry place with adequate ventilation.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Methanol (CAS# 67-56-1)	OSHA PEL - 200 ppm (skin) ACGIH TLV - 200 ppm (skin) ACGIH STEL - 250 ppm
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ENGINEERING CONTROLS:

Provide sufficient ventilation to maintain exposure below established exposure limits.

EYE / FACE PROTECTION:

Chemical splash goggles and full face-shield, in compliance with OSHA regulations, are advised.

SKIN PROTECTION:

Wear protective gloves (nitrile rubber, Buna-N, or butyl rubber), impervious clothing or apron and boots are recommended.

RESPIRATORY PROTECTION:

A NIOSH/MSHA approved supplied air respirator or canister-type respirator equipped with organic vapor cartridge is recommended if exposure exceeds established exposure limits.



SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless liquid @ 77° F (25° C)
Odor: Alcohol
Specific Gravity: 0.79 @ 68° F (20° C)
Initial Boiling Point: 147° F (64.5° C)
Melting Point: -144° F (-98° C)
Vapor Pressure (mm Hg): 97 @ 68° F (20° C)
Vapor Density (Air = 1): 1.11
Evaporation Rate: 5.9
(Butyl acetate = 1)

Solubility in Water: 100%
Volatile %: 100%
pH: Unavailable
Partition Coefficient: Log P_{ow} -0.77
(n-octanol/water)
Flash Point: 54° F (12° C) CC
Upper Explosion Limit: 36.5
Lower Explosion Limit: 6.0
Autoignition Temperature: 867° F (464° C)

SECTION 10 - STABILITY AND REACTIVITY

REACTIVITY:

Flammable liquid

STABILITY (conditions to avoid):

Stable under normal conditions of 70° F (21° C) and 14.7 psig (760 mm Hg)

POSSIBILITY OF HAZARDOUS REACTIONS:

Reacts violently with strong oxidizing materials. Vapors form explosive mixtures in air.

CONDITIONS TO AVOID:

Keep away from excessive heat, sparks, open flames and direct sunlight

INCOMPATIBLE MATERIALS:

Incompatible with strong oxidizing agents and strong acids

HAZARDOUS DECOMPOSITION PRODUCTS:

Not anticipated under normal conditions of use. Combustion will generate carbon dioxide, carbon monoxide and formaldehyde.

SECTION 11 - TOXICOLOGICAL INFORMATION

LIKELY ROUTES OF EXPOSURE:

Skin and eye contact and inhalation

SYMPTOMS:

Symptoms of persons exposed to this material include headache, nausea, dizziness, drowsiness and drying or defatting of skin.

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SECTION 11 - TOXICOLOGICAL INFORMATION (continued)

EFFECTS FROM EXPOSURE:

Immediate: Causes drying and defatting off skin, headache, nausea, dizziness and drowsiness and, in extreme cases, unconsciousness and coma.

Delayed: Symptoms may be delayed. Toxic by ingestion, inhalation or skin contact. Can cause metabolic acidosis, blindness, seizures, liver and kidney damage, unconsciousness, coma and death.

Chronic: May cause liver and kidney damage

TOXICITY DATA:

Toxicological information is based on information found in NIOSH Registry of Toxic Effects of Chemical Substances.

SKIN & EYE IRRITATION

Human (eye) - 5 ppm.
Rabbit (skin) - 500 mg/24H (moderate).
Rabbit (eye) - 40 mg (moderate)

TOXICITY DATA

Inhalation	Rat LC _{Lo} - 64000 ppm/4H
	Intraperitoneal Rat LD ₅₀ - 9540 mg/kg
Oral	Human LD _{Lo} - 340 mg/kg Man LD _{Lo} - 13 gm/kg Mouse LD ₅₀ - 870 mg/kg Rat LD ₅₀ - 5628 mg/kg
Intravenous	Mouse LD ₅₀ - 5673 mg/kg
	Subcutaneous Mouse LD ₅₀ - 9800 mg/kg
Skin	Rabbit LD ₅₀ - 20 gm/kg
Unreported	Man LD _{Lo} - 868 mg/kg

CARCINOGENICITY

This product is not reported to have any carcinogenic effects. This product (or component) is not listed in IARC Monographs, the current NTP Report on Carcinogens or the current ACGIH TLVs as a carcinogen or potential carcinogen. OSHA does not regulate it as a carcinogen.



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SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY:

96-hr. LC₅₀ - *Lepomis macrochirus* (Bluegill) - 15,400 mg/l

NOEC - *Oryzias latipes* - 7,900 mg/l - 200 hr

48-hr. EC₅₀ - *Daphnia magna* (Water flea) - > 10,000 mg/l

96-hr Growth inhibition EC₅₀ - *Scenedesmus capricornutum* (algae) - 22,000 mg/l

PERSISTENCE AND BIODEGRADABILITY

Readily biodegradable

BIOACCUMULATIVE POTENTIAL:

Does not bioaccumulate

Partition Coefficient (n-Octanol/water) - log P_{ow} -0.77

MOBILITY IN SOIL:

The product is mobile in soil.

PBT AND VPVB ASSESSMENT

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

OTHER ADVERSE EFFECTS:

Biochemical Oxygen Demand (BOD): 600 - 1,120 mg/g

Chemical Oxygen Demand (COD): 1,420 mg/g

SECTION 13 - DISPOSAL CONSIDERATIONS

Incineration is the recommended disposal method for all chemical wastes such as this product. Material collected on absorbent material may be deposited in a landfill in accordance with all applicable local, state and federal regulations.

This product, if disposed of, is considered a hazardous waste (U154) under current RCRA regulations.

SECTION 14 - TRANSPORT INFORMATION

U.S. DOT SHIPPING REGULATIONS:

UN Number: 1230

Shipping name: Methanol

Hazard Class: 3 (flammable liquid)

Packing Group: II

Reportable Quantity: 5000 pounds

Label:



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SECTION 14 - TRANSPORT INFORMATION

IMO and ICAO SHIPPING REGULATIONS:

UN Number: 1230
Shipping name: Methanol
Hazard Class: 3 (6.1)
Packing Group: II
Reportable Quantity: 5000 pounds

Labels:



SECTION 15 - REGULATORY INFORMATION

TSCA INFORMATION:

All components in this product are in compliance with TSCA Inventory requirements.

EINECS:

All components in this product are on the European Inventory of Existing Chemical Substances (200-659-6).

CEPA:

All components in this product are listed on the Canadian Domestic Substances List (DSL).

WHMIS Classification:

B-2: Flammable Liquid
D-1B: Toxic (acute effects)
D-2B: Toxic (skin and eye irritant)

CERCLA:

Methanol has been designated as hazardous substances with an RQ of 5000#.

SARA:

CERCLA/SARA 302: Not applicable
CERCLA/SARA 311/312: Acute, chronic, fire
CERCLA/SARA 313: Methanol (CAS# 67-56-1) – 100%



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SECTION 16 - OTHER INFORMATION

PREPARATION DATE: July 1, 2013
SUPERCEDES: Revision 6, dated March 3, 2011
REASON FOR REVISION: Updated to GHS

HMIS HAZARD RATING:

HEALTH	3	0 - LEAST
FIRE	3	1 - SLIGHT
REACTIVITY	0	2 - MODERATE
OTHER	-	3 - HIGH
		4 - EXTREME

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****END OF REPORT****