

Methanol
MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY NAME: DISTINCTIVE IMAGE
COMPANY ADDRESS: 50 Commerce Parkway
 Hodgenville, KY 42748
COMPANY PHONE: 800-223-1918
EMERGENCY PHONE: 800 424-9300
PRODUCT NAME: DI.Methanol
SYNONYMS: Carbinol, Methyl Alcohol, Methyl Hydroxide, Monohydroxymethane

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	Weight %
Methanol *	67-56-1	99.5 - 99.85%

*OSHA hazardous according to 29 CFR 1910.1200

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

Methanol is a clear, colorless, mobile liquid with a mild alcohol odor.

DANGER!

Flammable (flash point: TOC, 60 F; TCC, 54 F)

Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back.

Material can burn with little or no visible flame.

POTENTIAL HEALTH EFFECTS:

ROUTES OF EXPOSURE:

Skin, eyes, inhalation, ingestion.

IMMEDIATE EFFECTS:

SKIN:

Repeated or prolonged contact causes drying, brittleness, cracking and irritation. Prolonged and repeated skin contact with methanol-soaked material has produced toxic effects including vision effects and death.

EYES:

May cause eye injury which may persist for several days. Liquid (and vapor in high concentrations) causes irritation, tearing and a burning sensation.

INHALATION:

Extremely high levels cause stupor, headache, nausea, dizziness, unconsciousness and may produce adverse effects on vision.

INGESTION:

Poisonous or fatal if swallowed. A small amount (usually two or more ounces) can cause mental sluggishness, nausea and vomiting leading to severe illness, and may produce adverse effects on vision with possible blindness or death if treatment is not received.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Significant exposure to this chemical may adversely affect people with chronic disease of the central nervous system, skin, gastrointestinal tract and/or eyes.

FOR FURTHER INFORMATION, SEE:

SECTION 4. FIRST AID MEASURES
SECTION 5. FIRE FIGHTING MEASURES
SECTION 6. ACCIDENTAL RELEASE MEASURES
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES
SECTION 10. STABILITY AND REACTIVITY

SKIN:

Remove contaminated clothing and wash contaminated skin with large amounts of soap and water. If irritation persists, contact a physician.

EYES:

Flush eyes with water for at least 15 minutes. Contact a physician immediately.

INHALATION:

Remove patient from contaminated area. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact a physician immediately.

INGESTION:

Induce vomiting of conscious patient immediately by giving two glasses of water and pressing finger down throat. Contact a physician immediately.

NOTE TO PHYSICIANS:

When plasma methanol concentrations are higher than 20 mg/deciliter, when ingested doses are greater than 30 milliliters, and when there is evidence of acidosis or visual abnormalities, a 10% solution of ethanol in 5% aqueous dextrose, administered intravenously, is a safe effective antidote (Western Journal of Medicine, March 1985, p. 337).

5. FIRE FIGHTING MEASURES

NFPA (H, F, R): 1, 3, 0

FLAMMABLE PROPERTIES:

FLASHPOINT CLOSED CU: 60.0 F (15.6 C)
FLASHPOINT OPEN CUP: 54.0 F (12.2 C)
UPPER EXPLOSIVE LMT: 36.5 % In air by volume.
LOWER EXPLOSIVE LMT: 5.5% In air by volume.

HAZARDOUS PRODUCTS OF COMBUSTION:

Carbon monoxide.

EXTINGUISHING MEDIA:

Use carbon dioxide or dry chemical for small fires; alcohol-type aqueous film-forming foam or water spray for large fires. Water may be ineffective but should be used to cool fire-exposed structures and vessels.

FIRE FIGHTING INSTRUCTIONS:

If potential for exposure to vapors or products of combustion exists, wear complete personal protective equipment, including self-contained breathing apparatus with full face-piece operated in pressure demand or other positive pressure mode. Water spray can be used to reduce intensity of flames and to dilute spills to nonflammable mixture. Vapor is heavier than air and can travel considerable distance to a source of ignition and flash back. Material can burn with little or no visible flame.

6. ACCIDENTAL RELEASE MEASURES

Eliminate ignition sources. Avoid eye or skin contact; see "Section 8 – Exposure Controls/Personal Protection: for respirator information. Place leaking containers in well-ventilated area with spill containment. If fire potential exists, blanket spill with alcohol-type aqueous film-forming foam or use water spray to disperse vapors. Contain spill to facilitate clean-up. Clean-up methods may include absorbent materials, vacuum truck, etc. avoid runoff into storm sewers and ditches which lead to natural waterways.

Call the National Response Center (800-424-8802) if the quantity (of any component) spilled is equal to or greater than the reportable quantity (RQ) under CERCLA "Superfund": 5000 lb/day.

For more information, see "Section 15 – Regulatory Information".

7. HANDLING AND STORAGE

HANDLING:

Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapor. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Destroy contaminated leather clothing.

Do not expose to temperatures above 49 C (120 F). Use spark-resistant tools. Do not load into compartments adjacent to heated cargo. Provide emergency exhaust.

STORAGE:

Keep all containers tightly closed when not in use. Store out of direct sunlight and on an impermeable floor. Do not store with incompatible materials; see "Section 10 – Stability and Reactivity".

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred.

Explosion-proof equipment (for example, fans, switches, grounded ducts) should be used in mechanical ventilation systems.

PROTECTIVE EQUIPMENT:

A safety shower and eye bath should be readily available.

SKIN:

Wear impervious clothing and gloves to prevent repeated or prolonged contact. The recommended material of construction is: Butyl rubber.

EYES:

Wear chemical goggles when there is a reasonable chance of eye contact.

INHALATION:

Based on workplace contaminate level and working limits of the respirator, use a respirator approved by NIOSH/MSHA. The following is the minimum recommended equipment for an acceptable level of exposure. To estimate an acceptable level of exposure, see "Section 3 – Hazards Identification", "Section 8 – Exposure Controls/Personal Protection", and "Section 11 – Toxicological Information".

For concentrations ≥ 1 and ≤ 100 times the acceptable level: Use Type C full facepiece supplied-air respirator operated in pressure-demand or continuous-flow mode, positive-pressure self-contained breathing apparatus escape system.

For concentrations ≥ 100 times the acceptable level or IDLH level or unknown concentration (such as in emergencies): Use self-contained breathing apparatus with full facepiece in pressure-demand mode. Type C positive-pressure full facepiece supplied-air respirator with an auxiliary positive-pressure self-contained breathing apparatus escape system.

For escape: Use self-contained breathing apparatus with full facepiece or any respirator specifically approved for escape.

EXPOSURE GUIDELINES:

Methanol (67-56-1)

OSHA PEL	ACGIH TLV
200 ppm (TWA)	250 ppm (STEL)
-----	200 ppm (TWA)

ACGIH has given this substance a skin designation.

Cumberland Products has adopted the ACGIH TLV.

Immediately Dangerous to Life or Health (IDLH) level: 25,000 ppm.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Clear, colorless, mobile liquid.
ODOR:	Mild, alcohol odor.
PHYSICAL STATE:	Liquid
VAPOR PRESSURE:	96.0 HG (20C)
VAPOR DENSITY:	1.11 Air = 1 at 20 C
BOILING POINT:	64.6 C (148.3 F) (760 mm Hg)
FREEZING POINT:	-97.8 C (-144.0 F)
SOLUBILITY:	Complete in water.
SPECIFIC GRAVITY:	0.792 H ₂ O = 1 @ 20/20 C
EVAPORATION RATE:	2.0 BuAc = 1
% VOLATILES:	100.0
MOLECULAR WEIGHT:	32.0

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:

Stable

CONDITIONS TO AVOID:

Heat, sparks, flame.

INCOMPATIBILITY:

Sulfuric acid; oxidizing agents such as hydrogen peroxide, nitric acid, perchloric acid and chromium trioxide.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide.

HAZARDOUS POLYMERIZATION

Will not occur.

11. TOXICOLOGICAL INFORMATION

Oral LD₅₀: 7.5 g/kg (rats); practically non-toxic to rats.

Dermal: minimum lethal dose, 1.6 g/kg (monkeys); low toxicity to animals by skin contact.

Inhalation LC₅₀: 64,000 ppm (rats, 4 hrs) practically non-toxic in rats. Repeated exposure of monkeys to 5000 ppm, 6 hrs/day, 5 days/wk for 4 weeks caused no toxic response or effects on vision.

Mutagenicity: In vitro, limited evidence of mutagenicity (mouse lymphoma forward mutation assay). In vivo, no information.

Carcinogenicity: No evidence of carcinogenic potential in limited animal studies in which methanol was given orally or applied to the skin.

Reproduction: Reported to cause birth defects in rats exposed to very high levels of vapors (20,000 ppm).

12. ECOLOGICAL INFORMATION

This information is being researched.

13. DISPOSAL CONSIDERATIONS

All notification, clean-up and disposal should be carried out in accordance with federal, state and local regulations. Preferred methods of waste disposal are incineration or biological treatment in federal/state approved facility.

Hazardous waste (40 CFR 261): Yes; U154, D001.

14. TRANSPORT INFORMATION

DOT proper shipping name: Methanol
DOT hazard class: 3, Flammable Liquid
UN/NA identification number: UN1230
Packing group: II
ER guidebook number: 28
Reportable quantity (RQ): 5000 lb/2270 kg
Canadian Transportation of Dangerous Goods Classification: Flammable Liquid 3 (6.1)

15. REGULATORY INFORMATION

RECIPIENT MUST COMMUNICATE ALL PERTINENT INFORMATION HEREIN TO EMPLOYEES AND CUSTOMERS.

STATE REGULATIONS:

The following chemicals associated with the product are subject to the right-to-know regulations in these states:
Methanol (67-56-1): CT, FL, IL, LA, MA, NJ, NY, PA, RI

U.S. FEDERAL REGULATIONS:

We certify that all components are either on the TSCA inventory or qualify for an exemption.

SARA 313: Methanol 99.85% (67-56-1)

ENVIRONMENTAL:

CERCLA: Methanol 99.85% (67-56-1)

SARA 304: Methanol 99.85% (67-56-1)

SARA 311:

Acute health: Yes

Chronic health: Yes

Fire: Yes

Sudden release of pressure: No

Reactive: No

INTERNATIONAL REGULATIONS

Listed on the chemical inventories of the following countries: Australia, Canada, Europe (EINECS), Japan and Korea.

WHMIS INGREDIENT DISCLOSURE LISTED COMPONENTS

WHMIS CLASSIFICATION: Class B, Division 2; Class D, Division 1, Subdivision A.

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

MSDS prepared by: Cumberland Products, Inc.

HAZARD RATINGS

	HEALTH	FLAMM	REACT	OTHER
NFPA	1	3	0	
HMIS	3	3	0	X

This information is intended solely for the use of individuals trained in the NFPA and HMIS systems.

REVISION INDICATORS:

The following sections have been revised:

SECTION 7. – HANDLING AND STORAGE

HANDLING

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

SKIN

INHALATION

EXPOSURE GUIDELINES
SECTION 16 – OTHER INFORMATION
HAZARD RATINGS

DISCLAIMER

The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. Cumberland Products, Inc. makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards.