

# MATERIAL SAFETY DATA SHEET

## METHANOL

FILE NO.: 038  
DATE: 8/21/06



### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Methanol  
**SYNONYMS:** Methyl Alcohol, wood alcohol, Carbinol  
**CATALOG CODES:** VMT  
**MANUFACTURER:** Volu-Sol Incorporated  
**DIVISION:** Business Services  
**ADDRESS:** 5095 West 2100 South  
Salt Lake City, UT 84120  
**EMERGENCY PHONE:** (800) 535-5053  
**CHEMTREC PHONE:** (800) 424-9300  
**OTHER CALLS:** (801) 974-9474  
**FAX PHONE:** (801) 974-9553  
**CHEMICAL NAME:** N/A  
**CHEMICAL FAMILY:** N/A  
**CHEMICAL FORMULA:** Mixture  
**PRODUCT USE:** Laboratory Reagent  
**PREPARED BY:** ASH

### SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS NO.
METHANOL	67-56-1

**SARA 313 REPORTABLE**  
METHANOL CAS# 67-56-1

### SECTION 3: HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. VAPORS CAUSE COUGH, HEADACHE, FATIGUE, AND DROWSINESS.

**ROUTES OF ENTRY:** Inhalation/Ingestion/Skin/Eyes  
**POTENTIAL HEALTH EFFECTS**

**INHALATION:** Inhalation of vapors irritates the respiratory tract. May cause coughing, dizziness, dullness, and headache. Higher concentrations can produce central nervous system depression, narcosis, and unconsciousness.

**INGESTION:** Swallowing small amounts is not likely to produce harmful effects. Ingestion of larger amounts may produce abdominal pain, nausea and vomiting. Aspiration into lungs can produce severe lung damage and is a medical emergency. Other symptoms are expected to parallel inhalation.

**SKIN CONTACT:** Irritating due to defatting action on skin. Causes redness, pain, drying and cracking of the skin.

**EYE CONTACT:** Vapors are irritating to the eyes. Splashes may cause severe irritation, with stinging, tearing, redness and pain.

**CHRONIC EXPOSURE:** Prolonged or repeated skin contact may produce severe irritation or dermatitis.

**AGGRAVATION OF PRE-EXISTING CONDITIONS:** Use of alcoholic beverages enhances toxic effects. Exposure may increase the toxic potential of chlorinated hydrocarbons, such as chloroform, trichloroethane.

**CARCINOGENICITY:** Not Listed  
**OSHA: ACGIH: NTP: IARC:**

### SECTION 4: FIRST AID MEASURES

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**INGESTION:** Aspiration hazard. If swallowed, vomiting may occur spontaneously, but DO NOT INDUCE. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Call a physician immediately.

**SKIN CONTACT:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**EYE CONTACT:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.

### SECTION 5: FIRE-FIGHTING MEASURES

**FLAMMABLE LIMITS IN AIR (% BY VOLUME);** UPPER: 31.0 %  
LOWER: 6.0 %

**FLASH POINT:** 12 deg C ( 53.60 deg F)

**AUTOIGNITION TEMPERATURE:** 455 deg C ( 851.00 deg F)

**EXTINGUISHING MEDIA:** Dry chemical, alcohol foam or carbon dioxide. Water may be ineffective. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

**SPECIAL FIRE FIGHTING PROCEDURES:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Vapors can flow along surfaces to distant ignition source and flash back. Contact with strong oxidizers may cause fire. Sealed containers may rupture when heated. This material may produce a floating fire hazard. Sensitive to static discharge. Ethanol burns with a near invisible flame in direct light.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**ACCIDENTAL RELEASE MEASURES:** Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

### SECTION 7: HANDLING AND STORAGE

**HANDLING AND STORAGE:** Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**AIRBORNE EXPOSURE LIMITS:** \*ppm = (mg/M<sup>3</sup>)(24.45)/MW

All readings in ppm	OSHA PEL'S		ACGIH	
	TWA	CEILING	TLV	STEL
Methanol	200	-	200	250

**VENTILATION SYSTEM:** A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**PERSONAL RESPIRATORS (NIOSH APPROVED):** If the exposure limit is exceeded and engineering controls are not feasible, a half-face organic vapor respirator may be worn for up to ten times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece organic vapor respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

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### SECTION 8: CONT'D

**SKIN PROTECTION:** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**EYE PROTECTION:** Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:**

Clear, colorless liquid.

**Odor:**

Characteristic odor.

**Solubility:**

Miscible in water.

**Specific Gravity:**

0.8

**pH:**

No information found.

**% Volatiles by volume @ 21C (70F):**

100

**Boiling Point:**

64.5C (147F)

**Melting Point:**

-98C (-144F)

**Vapor Density (Air=1):**

1.1

**Vapor Pressure (mm Hg):**

97 @ 20C (68F)

**Evaporation Rate (BuAc=1):**

5.9

### SECTION 10: STABILITY AND REACTIVITY

**STABLE**

Yes

**UNSTABLE**

**STABILITY:** Stable under ordinary conditions of use and storage.

**CONDITIONS TO AVOID (STABILITY):** Heat, flames, ignition sources.

**DECOMPOSITION OR BY-PRODUCTS:** Not Available

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID (POLYMERIZATION):** N/A

### SECTION 11: TOXICOLOGICAL INFORMATION

**TOXICOLOGICAL INFORMATION:**

**LD50/LC50:**

CAS# 67-56-1: Draize test, rabbit, eye: 40 mg Moderate; Draize test, rabbit, eye: 100 mg/24H Moderate; Draize test, rabbit, skin: 20 mg/24H Moderate; Inhalation, rabbit: LC50 = 81000 mg/m<sup>3</sup>/14H; Inhalation, rat: LC50 = 64000 ppm/4H; Oral, mouse: LD50 = 7300 mg/kg; Oral, rabbit: LD50 = 14200 mg/kg; Oral, rat: LD50 = 5600 mg/kg; Skin, rabbit: LD50 = 15800 mg/kg.

### SECTION 12: ECOLOGICAL INFORMATION

**Environmental Fate:**

When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is expected to quickly evaporate. When released into the water, this material is expected to have a half-life between 1 and 10 days. When released into water, this material is expected to readily biodegrade. When released into the air, this material is expected to exist in the aerosol phase with a short half-life. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into air, this material is expected to have a half-life between 10 and 30 days. When released into the air, this material is expected to be readily removed from the atmosphere by wet deposition.

**Environmental Toxicity:**

This material is expected to be slightly toxic to aquatic life.

### SECTION 13: DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHOD:** Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

### SECTION 14: TRANSPORT INFORMATION

US DOT	IMO	IATA	RID/ADR	CANADIAN TDG
Ship Name: Methanol	Ship Name: Methanol	Ship Name: Methanol	Ship Name: Methanol	Ship Name: Methanol
Hazard Class: 3	Hazard Class: 3	Hazard Class: 3	Hazard Class: 3	Hazard Class: 3
UN Number: UN1170	UN Number: UN1170	UN Number: UN1170	UN Number: UN1170	UN Number: UN1170
Packing Group: II	Packing Group: 2	Packing Group: 2	Packing Group: 2	Packing Group: 2

### SECTION 15: REGULATORY INFORMATION

<b>TSCA</b>	CAS# 67-56-1 is listed on the TSCA inventory.
<b>CERCLA/SARA</b>	CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ
<b>Clean Air Act</b>	This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.
<b>Clean Water Act</b>	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 Pollutants under the CWA.
<b>OSHA</b>	None of the chemicals in this product are considered highly hazardous by OSHA
<b>State</b>	CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
<b>International Regulations</b>	CAS# 67-56-1 is listed on Canada's DSL List. CAS# 67-56-1 is listed on Canada's Ingredient Disclosure List.

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