



## Material Safety Data Sheet

### I. Product and Supplier Information

Product Name: MicroC™  
 Product Number: NA  
 Product Synonyms: None  
 Chemical Family or Formula: Methyl alcohol solution

MSDS Number: EOS MicroC™  
 Publication Date: January 14, 2008  
 Replaces: December 21, 2006

Supplier: Environmental Operating Solutions, Inc. Phone: 508-743-8440  
 4A Colonel Drive Fax: 508-743-8443  
 Bourne, MA 02532 Web page: [www.eosenvironmental.com](http://www.eosenvironmental.com)

Product Information: 508-743-8440  
 Transportation Emergency: 800-424-9300

Note: The purpose of this MSDS is to provide safe handling, shipping and disposal information for users of the product. It is not intended to, nor does it, provide complete or extensive toxicological data on the product or its components. Users who require this information are referred to primary suppliers of the ingredients of interest.

### II. Composition and Information on Ingredients

CAS #	SARA	Material or Component	Exposure Limits				
			%	RQ#	TWA*	STEL*	WEEL*
67-56-1	Yes 1.0	Methanol A4, BEI	5-6	5000	200 ppm	250 ppm	NE

A4=Not Classifiable as a Human Carcinogen  
 BEI= Biological Exposure Limit exists for this material

Since the only hazard in this product is from its methanol content, all references are to it unless otherwise indicated.

No component is listed in "Threshold and Biological Exposure Indices for 2004" from ACGIH except as noted above. Components listed in Title III Sec. 313 (EPCRA) are indicated by "Yes" above.

\*TWA= Time Weighted Average; STEL= Short Term Exposure Limit; WEEL= Workplace Employee Exposure Level  
 dm= de minimus, the level of a compound below which its discharge need not be reported per Sec. 313.

NE= Not Established

### III. Hazards Identification

**OSHA Hazard Classification:** METHANOL IS HARMFUL IF INHALED OR SWALLOWED.  
 CAUSES EYE IRRITATION. Methanol may cause damage to central nervous system, liver or kidneys from over exposure or ingestion. Chronic exposure to methanol during pregnancy may be harmful.

**Routes of Entry:** Skin, eyes, Inhalation, ingestion-toxic

**Chemical Interactions:** Avoid contact with all oxidizing agents.

**Medical Conditions Aggravated:**  
 Chronic disease of the nervous system, skin gastrointestinal tract and eyes.

#### Human Threshold Response Data

**Odor Threshold:** Not established

**Irritation Threshold:** Not established

#### Hazard Category Classifications and Ratings

Hazard Categories:	Health	Fire	Pressure	Reactivity	Reference 49 CFR 171.8,
Immediate	Yes	Yes	No	No	OSHA 29 CFR 1910.1200 and SARA 302/311/312/313.
Delayed	Yes	No	No	No	
HMIS Hazard Ratings: Health 1 Fire 2 Instability 0 Other B (Goggles, gloves)					
NFPA 704 Hazard Ratings: Health 1 Flammability 2 Reactivity 0 Special NA					
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4					

**Immediate (Acute) Health Effects from methanol content:**

## Inhalation Toxicity:

Methanol is harmful if inhaled or swallowed.

Inhalation Irritation: High concentrations or prolonged exposure to methanol can cause headaches, dizziness, nausea and may produce adverse effects on vision.

## Skin Contact:

Extended skin contact may cause pain, redness, and irritation.

## Skin Absorption:

May be absorbed through the skin with damage to kidneys, liver and central nervous system.

## Eye Contact

Liquid and vapor cause eye irritation, tearing and a burning sensation.

May cause eye injury which can last several days.

## Ingestion Irritation:

Methanol is poisonous or fatal if swallowed. A small amount can cause mental sluggishness, nausea and vomiting leading to adverse effects on vision, possible blindness and death if treatment is not received.

## Ingestion Toxicity:

See above entry.

## Acute Target Organ Toxicity:

Kidneys, liver, central nervous system.

**Prolonged (Chronic) Health Effects**

## Carcinogenicity:

This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

## Reproductive and Developmental Toxicity:

Methanol is reported to cause birth defects in rats exposed to very high levels of vapors (20, 000 ppm).

## Sensitization:

None known.

## Inhalation:

Prolonged or repeated exposure to methanol may cause more severe irritation. May cause pulmonary edema (fluid build-up in lungs). See also Inhalation entry above.

## Skin Contact:

Prolonged or repeated skin exposure may cause dermatitis.

## Skin Absorption:

Reported effects from chronic methanol exposure include vision impairment and death.

## Ingestion:

Chronic ingestion unlikely. See Acute entry above.

## General :

Prolonged or repeated exposure to methanol may cause all acute toxic symptoms described above.

## Chronic Target Organ Toxicity:

Vision, death from methanol exposure.

## Supplemental Health Hazard Information:

No additional health information available.

**IV. First Aid**

## Inhalation:

Remove individual to fresh air. If not breathing, give artificial respiration or oxygen as appropriate. Seek medical attention if breathing becomes difficult.

## Skin Contact:

Flush skin with water for 15 minutes and remove contaminated clothing. Wash shoes and clothing before reuse.

## Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart.

## Ingestion:

Immediately drink water to dilute. Induce vomiting. Consult a physician immediately.

Never give anything by mouth to an unconscious person.

**Note to physician:**

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. (WJ of M, Mar 1985, p 337)

**V. Fire Fighting Measures**

**Flammability Summary (OSHA):**

Flash point above 131°F (ASTM D 93). Product does not support combustion according to test method ASTM D 4206..

**Flammable Properties:**

Flash Point: 131 F Pinsky-Martens Closed Cup - ASTM D 93

Sustained Burning: MicroC does not sustain combustion according to test method ASTM D 4206

Autoignition Temperature: Product Does not have an AutoIgnition temperature up to 500 F.

Upper Flammable/Explosive Limit, % in a 36% for methanol

Lower Flammable/Explosive Limit, % in a 6.7 % for methanol

Fire/Explosion Hazards (Methanol Extremely dangerous! Vapor can travel distances to ignition sources and flash back.)

Hot organic chemical vapors or mists are susceptible to sudden spontaneous combustion when mixed with air.

Ignition may occur at temperatures below published autoignition or ignition temperatures. Ignition temperatures decrease with increasing vapor volume and vapor/air contact time and are influenced by pressure changes.

Ignition may occur at typical elevated temperature process conditions, especially in processes operating under vacuum if subjected to the sudden ingress of air, or with sudden escape of hot vapors into outside air.

**Extinguishing Media:**

Use equipment appropriate to the main case of the fire. Water spray, foam, dry chemical or CO2

Do not allow contaminated water to enter sewers or waterways.

**Fire Fighting Instructions:**

In case of fire, use normal fire fighting equipment including a NIOSH approved self-contained breathing apparatus (SCBA). Use water to cool containers.

**Hazardous Combustion Products:**

Oxides of carbon.

**VI. Accidental Release Measures****Personal Protection for Emergency Situations:**

Evacuate the area of all unnecessary personnel. Eliminate any ignition sources until the area is determined to be free from explosion and fire hazards. Contain the release and eliminate its source if this can be done safely.

**Spill Mitigation Procedures**

Air Release: (Not a likely event.)

Hazardous concentrations in air may be found in local spill area and immediately downwind. Vapors may be suppressed by the use of water fog. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste. Do not flush to sewer! US regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of stipulated quantities. US Coast Guard National Response Center is 800-424-8802.

Water Release:

This material is soluble in water. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste. Notify all downstream users of possible contamination.

Land Release:

Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Decontaminate all clothing and the spill area using a detergent and flush with large amounts of water. Contain all contaminated water for disposal and/or treatment.

Additional Spill Information:

Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section XIII, Disposal Considerations.

**VII. Handling and Storage**

Handling: Use with adequate ventilation. Vent containers before opening wide.

Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash with water. Avoid breathing vapor, mist or gas. Electrically ground all equipment when handling this product.

Retained residue may make empty containers hazardous. USE CAUTION!

Storage

Keep container closed when not in use. Store in a cool area away from ignition sources and oxidizers.

Transfer pumps in enclosed containers should be explosion proof motors.

Shelf Life Limitations:

See label or certificate of analysis for shelf life if applicable.

Incompatible Materials for Storage:

Refer to Section X, "Incompatible Materials."

**VIII. Exposure Controls and Personal Protection**

Ventilation:

Local exhaust ventilation or other engineering controls are not normally required when handling or using this product. Otherwise, use general exhaust ventilation if that is sufficient for general worker safety and comfort. A NIOSH/MSHA approved air supplied respirator is advised in the absence of adequate environmental control.

#### Protective Equipment for Routine Use of Product

##### Respiratory Protection:

See previous paragraph. Material should be handled or transferred in an approved fume hood or with adequate ventilation.

##### Respirator Type(s):

Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Skin: Wear impervious gloves (butyl rubber, Viton, e.g.) to avoid skin contact. Follow good industrial hygiene practices.

Eyes: Use chemical safety glasses with side shields, safety goggles and/or a full face shield where splashing is possible.

Protective Clothing Type: Impervious

Other: A safety shower and eye bath should be readily available.

Exposure Limit Data : See Section II

Chemical Name: NIOSH Level Immediately Dangerous to Life or Health: (for methanol)  
1990 NIOSH 25,000 ppm; 1994 NIOSH 6000ppm

## IX. Physical Data

Physical State:	Liquid	
Color:	Light Green	
Odor:	Mild alcohol odor	
Molecular Weight:	32.0 for methanol, otherwise, not appropriate for solutions.	
pH (@ 25 Deg. C):	5.8	
Octanol/Water Coeff:	No data	
Solubility in Water:	100%	
Bulk Density:	Not applicable	
Specific Gravity:	1.18	Bulk Density (lbs/gallon 9.84
Vapor Density (Air = 1):	1.1	
Vapor Pressure: (@ 20 Deg. C):	Not applicable	
Evaporation Rate Butyl acetate =1)	Not applicable	
Volatiles % by vol.:	No Volatiles per EPA 8260B	
Boiling Point:	Not determined	
Freezing Point:	-20 C (- 4F)	

## X. Stability and Reactivity

### Stability and Reactivity Summary:

Stable under normal conditions.

### Reactive Properties:

Sensitivity to mechanical shock:	None
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	High temperatures, exposure to heat, sparks, flame
Chemical Incompatibility:	Oxidizers
Incompatible materials:	None known
Hazardous Decomposition Products:	CO, CO2
Decomposition Temperature:	No data
Product May Be Unstable At Temperatures Above:	No data

## XI. Toxicological Information

<b>Component Animal Toxicology</b>	Methanol
Oral LD50 value mg/kg:	5628 (rat)
Dermal LD50 value mg/kg:	15,800 (rbt)

Inhalation LC50 value ppm: 64,000 ppm (rats, 4 hrs)

Product Animal Toxicity:  
No data

Skin Irritation:  
This material is expected to be moderately irritating upon extended or repeated contact.

Eye Irritation:  
This material is expected to be irritating.

Reproductive and Developmental Toxicity:  
Caused birth defects in rats exposed to high levels of vapors : 20,000 ppm methanol.

Component Data:  
All data refer to methanol.

Mutagenicity:  
In vitro: Limited positive evidence. In vivo: No information.

Carcinogenicity:  
No evidence in animals from ingestion or skin absorption.  
OSHA, NTP, or EPA.

## XII. Ecological Information

### Ecological Toxicity Values:

Environmental fate: No information found

Environmental Toxicity: No information found

## XIII. Disposal Considerations

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THIS MATERIAL  
THE USER OF THIS MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES  
AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS

### Waste Disposal Summary:

Product as supplied qualifies as "Unlisted Hazardous Waste D001" with the characteristic of ignitability.

Potential US EPA Waste Codes:  
D001

Disposal Methods:  
Disposed of in accordance with local, state and federal regulations for hazardous waste.

Components subject to land ban restrictions:  
No components subject to land ban restrictions.

## XIV. Transportation Information

Proper Shipping Name, Hazard Class, UN/NA Number Packing Group, Emergency Response Guide Number: 800-424-9300	
US Domestic DOT:	Not regulated per exemptions: 49 CFR 173.120(a)(3) and 173.120(b)(3)
Labels required per 49 CFR 172.101:	Not regulated
Size for "Limited quantity" per 49 CFR 173.150-.155:	Not regulated
Reportable Quantity ("RQ") per 49 CFR 172.101:	Not regulated
Bulk Shipments (Domestic): Combustible Liquid, N.O.S. NA1993, Hazard Class = Combustible, PG III	

**XV. Regulatory Information**

## UNITED STATES:

## Toxic Substances Control Act (TSCA):

The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

## Pesticide acceptance indication: US EPA Registration Number:

Not applicable

## Superfund Amendments and Reauthorization Act (SARA) Title III:

See Section III of this MSDS.

## Hazard Categories Sections 311/312 (40 CFR 370.2):

## Health:

Acute Yes

Chronic Yes

## Physical: None

## Emergency Planning &amp; Community Right to Know (40 CFR 355, App. A):

## Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

Not applicable

## Reportable Quantity (40 CFR 302.4):

Methanol 5000#

## Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components

See section II.

## State Right-to-Know Regulations Status of Ingredients

Methanol listed in: CT, FL, IL, MA, NJ, NY, PA, RI

**XVI. Additional Information**

MSDS REVISION STATUS: Created Apr 10th, 2006.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. WE BELIEVE THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF ITS PUBLICATION DATE, BUT MAKE NO WARRANTY THAT IT IS. IF THIS MSDS IS MORE THAN THREE YEARS OLD YOU SHOULD CONTACT THE SUPPLIER TO MAKE CERTAIN THAT THE INFORMATION IS CURRENT.