SAFETY DATA SHEET

Methanol

This SDS is valid for all grades that start with catalog number 339

1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

Product Identifier: High Purity Chemicals

Synonyms: Methyl Alcohol; Carbinol; Methol hydroxide; Methyl hydrate; Methyl hydroxide; Methylol; Wood alcohol

Other means of identification: CAS No. 67-56-1
EINECS No. 200-659-6

Recommended use of the chemical and restrictions on use:

Supplier Details:

Pharmco Products, Inc.
58 Vale Road, Brookfield,
CT 06804, USA.
Tel: 203.740.3471
Fax: 203.740.3481
CCN17213

Pharmco Products, Inc.
1101 Isaac Shelby Drive, Shelbyville,
KY 40065, USA.
Tel: 502.232.7600
Fax: 502.633.6100
CCN17213

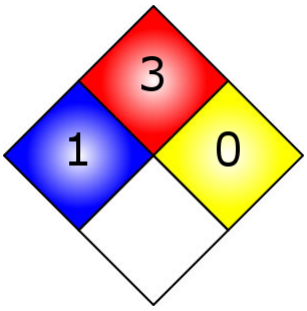
Emergency Contact: **CHEMTREC: 1.800.424.9300 (USA) / +1.703.527.3887 (International)**

2. HAZARDS IDENTIFICATION

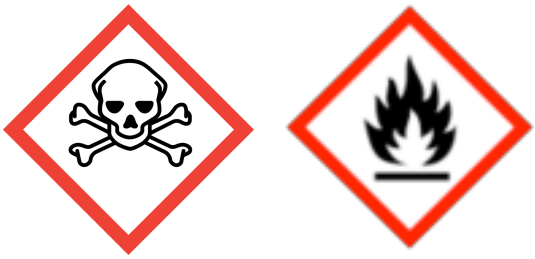
OSHA Hazards:
Flammable liquid, Irritant, Target organ effect, Toxic by ingestion, Toxic by skin absorption

Target Organs:
Central nervous system, Eyes, Kidney, Liver

NFPA



GHS label elements, including precautionary statements



Signal Word:
DANGER!

Hazard statement(s)

H225	Highly flammable liquid and vapor.
H301 + H311	Toxic if swallowed or in contact with skin.
H315	Causes skin irritation.
H331	Toxic if inhaled

Precautionary statement(s)

P263	Avoid contact during pregnancy/while nursing.
P501	Dispose of contents and container to an approved waste disposal plant.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P270	Do not eat, drink or smoke when using this product.
P240	Ground/bond container and receiving equipment.
P307 + P311	IF exposed: Call a POISON CENTER or doctor/ physician.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or a doctor/ physician.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P210	Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
P233	Keep container tightly closed.
P322	Specific measures (see first aid measures on this label)
P321	Specific treatment (see supplemental first aid instructions on this label).
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.
P243	Take precautionary measures against static discharge.
P241	Use explosion-proof electrical, ventilating, and lighting equipment.
P242	Use only non-sparking tools.
P271	Use only outdoors or in a well-ventilated area.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves and eye and face protection.

GHS Classification(s)
Acute Toxicity, Dermal (Category 3)
Acute Toxicity, Inhalation (Category 3)
Acute Toxicity, Oral (Category 3)
Flammable Liquids (Category 2)
Specific target organ toxicity - single exposure (Category 1)
Specific target organ toxicity - single exposure (Category 2)

Other hazards which do not result in classification:

Potential Health Effects:

Organ	Description
Eyes	Causes eye irritation.
Ingestion	Toxic if swallowed.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	Toxic if absorbed through skin. Causes skin irritation.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical identity:	Methyl Alcohol
Common name / Synonym:	Methanol; Carbinol; Methol hydroxide; Methyl hydrate; Methyl hydroxide; Methylol; Wood alcohol
CAS number:	67-56-1
EINECS number:	200-659-6
ICSC number:	0057
RTECS #:	PC1400000
UN #:	1230
EC #:	603-001-00-X

% Weight	Material	CAS
100	Methyl Alcohol	67-56-1

4. FIRST AID MEASURES

General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Skin

Wash skin with soap and copious amounts of water. Seek medical attention.

Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Eyes

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

Ingestion

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

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

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Carbon oxides expected to be the primary hazardous combustion product.

Special protective equipment and precautions for firefighters:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

Flammable Properties

Classification

OSHA/NFPA Class IB Flammable Liquid.

Flash point

11 °C (52 °F) - Closed Cup

Autoignition temperature

464 °C (867°F)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear respiratory protection. Do not inhale vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions:

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

Methods and materials for containment and cleaning up:

Contain spill, then collect with an electrically protected vacuum cleaner or by wet-brushing and put the material into a convenient waste disposal container. Keep container closed.

7. HANDLING AND STORAGE

Precautions for safe handling:

Do not get on skin or in eyes. Do not inhale vapor or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

Conditions for safe storage, including any incompatibilites:

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters, e.g., occupational exposure limit values or biological limit values:

Occupational Exposure Limits

Component	Source	Type	Value	Note
Methyl Alcohol	US (ACGIH)	TWA	200 ppm	
Methyl Alcohol	US (OSHA)	TWA	200 ppm	
Methyl Alcohol	US (ACGIH)	STEL	250 ppm	

Appropriate engineering controls:

General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

Individual protection measures, such as personal protective equipment:

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the

respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection:
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection:
Use chemical safety goggles and/or a full face shield where splashing is possible. Use equipment approved by appropriate government standards, such as NIOSH (US) or EN166 (EU) Maintain eye wash fountain and quick-drench facilities in work area.

Skin and body protection:
Wear impervious, flame retardant, antistatic protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance *(physical state, color, etc.)*	Liquid. Colorless, clear.
Freezing point	-98 °C (-144 °F)
Initial boiling point and boiling range	64 °C (147°F)
Flash point	11 °C (52 °F) - Closed Cup
Upper / Lower flammability or explosive limits	6.0% (V) / 36.0% (V)
Vapor pressure	130.3 hPa (97.7 mmHg) at 20 °C (68 °F)
Vapor Density	1.1
Relative Density	0.791 g/mL at 25 °C (77 °F)
Solubility(ies)	completely miscible
Auto-ignition temperature	464 °C (867 °F)
Formula (METHYL ALCOHOL)	CH4O
Molecular Weight (METHYL ALCOHOL)	32.04 g/mol

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Vapors may form explosive mixture with air.
Conditions to avoid (e.g., static discharge, shock or vibration)	Heat, flames, and sparks. Extreme temperatures and direct sunlight.
Incompatible materials	Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids

Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION

- Methyl Alcohol 67-56-1

Product Summary:
No data available for the mutagenic, teratogenic, or reproductive effects of the product.

Acute Toxicity:

LC50 (Inhl)	Rat	64,000 mg/Kg BWT	4 hours
LD50 (Oral)	Rat	5,628 mg/Kg BWT	
LD50 (Skin)	Rabbit	15,800 mg/Kg BWT	

Irritation:

Eyes (METHANOL)
Direct contact with the eyes produces a mild, reversible irritation, assuming treatment is initiated promptly. Methanol ingestion or inhalation can lead to visual disturbance that can proceed to blindness.

Skin
Standard Draize skin test (rabbit) - Dose: 20 mg/24 hrs Reaction: Moderate Repeated exposure may cause skin dryness or cracking.

Carcinogenicity
IARC: Not classifiable as a human carcinogen.
ACGIH: Not classifiable as a human carcinogen.
NTP: Not classifiable as a human carcinogen.
OSHA: Not classifiable as a human carcinogen.

Other Hazards

Organ	Description
Eyes	Irritating to the eyes.
Ingestion	Poison, may be fatal or cause blindness if swallowed. Cannot be made non-poisonous. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Inhalation	Toxic by inhalation. Vapor harmful. May be irritating to the respiratory tract.
Skin	Toxic in contact with skin. Irritating to skin.
Chronic	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse liver effects. May cause adverse kidney effects.Methanol is slowly eliminated from the body, therefore it can have cumulative toxicity effects with repeated exposures.

12. ECOLOGICAL INFORMATION

- Methyl Alcohol 67-56-1

Ecotoxicity (aquatic and terrestrial, where available):
Acute Fish Toxicity (METHANOL)
LC50 / 96 hours Lepomis macrocirus: 15,400 mg/L / LC50 / 96 hours Fathead minnow: 29,400 mg/L

Toxicity to Aquatic Plants (METHANOL)
EC50 / 96 hours Scenedesmus capricornutum: 22,000 mg/L

Persistence and degradability:
This material is expected to be readily biodegradable. There is evidence that it is degraded under anaerobic conditions.

Bioaccumulative potential:
Bioconcentration factor (BCF) of 0.2. This material is not expected to bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:
Vapors may collect in empty containers. Treat empty containers as hazardous. Dispose of spill-clean up and other wastes in accordance with federal, state, and local regulations.

14. TRANSPORT INFORMATION

Description of waste residues and information on their safe handling and methods of disposal:

UN number	UN1230
UN proper shipping name	Methanol
Transport hazard class(es)	3
Packing group *(if applicable)*	II

Reportable Quantity
5,000 lbs.
IMDG
UN-Number: UN1230 Class: 3 (6.1) Packing Group: II
EMS-No: F-E, S-D

Proper shipping name: METHANOL
Marine pollutant: No

IATA

UN-Number: UN1230 Class: 3 (6.1) Packing Group: II
Proper shipping name: Methanol

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question:

OSHA Hazards

Flammable liquid, Irritant, Target organ effect, Toxic by ingestion, Toxic by skin absorption

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA title III, Section 313: METHANOL (CAS# 67-56-1) Revision date 2007-07-01.

SARA 311/312 Hazards

Acute Health Hazard
Chronic Health Hazard
Fire Hazard

CERCLA

No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA

Massachusetts Right To Know Components

Methanol CAS-No.67-56-1 Revision Date 2007-07-01

Pennsylvania Right To Know Components
Methanol CAS-No.67-56-1 Revision Date 2007-07-01

New Jersey Right To Know Components
Methanol CAS-No.67-56-1 Revision Date 2007-07-01

California Prop 65 Components
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. METHANOL CAS-No. 67-56-1 Revision Date 2012-03-16

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16. OTHER INFORMATION:
INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

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