Material Safety Data Sheet
Methyl Alcohol

ACC# 14280

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Methyl Alcohol


Synonyms: Carbinol, methanol, methyl hydroxide, monohydroxymethane, pyroxylc spirit, wood alcohol, wood naptha, wood spirit.

Company Identification:
Fisher Scientific
1 Reagent Lane
Fairlawn, NJ 07410

For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1</td>
<td>Methyl alcohol</td>
<td>&gt;99%</td>
<td>200-659-6</td>
</tr>
</tbody>
</table>

Hazard Symbols: TF
Risk Phrases: 11 23/25

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless. Flash Point: 12 deg C. Danger!
Flammable liquid. Harmful if inhaled. This substance has caused adverse reproductive and fetal effects in animals. May cause central nervous system depression. May be absorbed through the skin. May cause kidney damage. Poison! May cause respiratory and digestive tract irritation. Cannot be made non-poisonous. Causes eye and skin irritation. May be fatal or cause blindness if swallowed.
Target Organs: Kidneys, central nervous system, liver, eyes.

Potential Health Effects

Eye: Causes moderate eye irritation. Vapors may cause eye irritation. May cause painful sensitization to light.
Skin: May cause skin irritation. May be absorbed through the skin in harmful amounts.
Ingestion: May cause irritation of the digestive tract. May cause central
nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause kidney failure.

**Inhalation:** May cause respiratory tract irritation. May cause liver and kidney damage. May cause adverse central nervous system effects including headache, convulsions, and possible death. May cause visual impairment and possible permanent blindness. May cause effects similar to those described for ingestion.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion.

### Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed.

**Skin:** Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid immediately. Induce vomiting by giving one teaspoon of Syrup of Ipecac.

**Inhalation:** Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:** Effects may be delayed. Ethanol may inhibit methanol metabolism.

**Antidote:** No specific antidote exists.

### Section 5 - Firefighting Measures

**General Information:** Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint.

**Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective.

**Autoignition Temperature:** 455 deg C (851.00 deg F)

**Flash Point:** 12 deg C (53.60 deg F)(estimated) Health: ; Flammability: ; Reactivity: Explosion Limits, Lower: 6.00 vol % Upper: 31.00 vol %

### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as
indicated in Section 8.

**Spills/Leaks:** Scoop up with a nonsparking tool, then place into a suitable container for disposal. Use water spray to disperse the gas/vapor. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite.

### Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Do not get on skin or in eyes. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage:** Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl alcohol</td>
<td>200 ppm; 262 mg/m3; 250 ppm STEL; 328 mg/m3 STEL; skin potential for cutaneous absorption</td>
<td>200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH</td>
<td>200 ppm TWA; 260 mg/m3 TWA</td>
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</tbody>
</table>

**OSHA Vacated PELs:** Methyl alcohol: 200 ppm TWA; 260 mg/m3 TWA

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

### Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** clear, colorless
Odor: alcohol-like - weak odor
pH: Not available.
Vapor Pressure: 96 mm Hg
Vapor Density: 1.1 (Air=1)
Evaporation Rate:
Viscosity: 0.55 cP 20 deg
Boiling Point: 64.7760.00 deg C
Freezing/Melting Point: -98 deg C
Decomposition Temperature: Not available.
Solubility: miscible
Specific Gravity/Density: .7910g/cm3
Molecular Formula: CH4O
Molecular Weight:

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.
Conditions to Avoid: High temperatures, incompatible materials, ignition sources.
Incompatibilities with Other Materials: Oxidants (such as barium perchlorate, bromine, chlorine, hydrogen peroxide, lead perchlorate, perchloric acid, sodium hypochlorite). Active metals (such as potassium and magnesium). Substance is also incompatible with specific chemicals including: acetyl bromide, alkyl aluminum salts, beryllium dihydride, carbon tetrachloride + metals, chloroform + heat, chloroform + sodium hydroxide, cyanuric chloride, diethyl zinc, nitric acid, and potassium tertbutoxide. Please refer to the NFPA Fire Protection Guide for all specifics.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, formaldehyde.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 67-56-1: PC1400000
LD50/LC50:
CAS# 67-56-1:
Inhalation, rat: LC50 = 64000 ppm/4H;
Oral, mouse: LD50 = 7300 mg/kg;
Oral, rabbit: LD50 = 14200 mg/kg;
Oral, rat: LD50 = 5628 mg/kg;
Skin, rabbit: LD50 = 15800 mg/kg;
Carcinogenicity:
CAS# 67-56-1: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No information available.
Teratogenicity: Effects on Newborn: behavioral, orl-rat TDLo=7500 mg/kg. Embryo or Fetus: fetotoxicity, TCLo=10000 ppm/7H Specific Developmental Abnormalities: cardiovascular, musculoskeletal, urogenital, TCLo=20000 ppm/7H.
Reproductive Effects: Paternal Effects: spermatogenesis, ipr-mouse TDLo=5 g/kg.
Neurotoxicity: No information available.
**Mutagenicity:** DNA Damage: orl-rat 10 umol/kg. DNA Inhibition: human lymphocyte 300 mmol/L. Microbial Mutation w/o S9: S. cerevisiae 12 pph.  
**Other Studies:** None.

**Section 12 - Ecological Information**

**Ecotoxicity:** Goldfish (fresh water), 250 ppm/11H, death. Aquatic toxicity rating: TLm 96 >1000 ppm.  
**Environmental Fate:** No information reported.  
**Physical/Chemical:** No information available.  
**Other:** None.

**Section 13 - Disposal Considerations**

Dispose of in a manner consistent with federal, state, and local regulations.  
**RCRA D-Series Maximum Concentration of Contaminants:** None listed.  
**RCRA D-Series Chronic Toxicity Reference Levels:** None listed.  
**RCRA F-Series:** None listed.  
**RCRA P-Series:** None listed.  
**RCRA U-Series:** CAS# 67-56-1: waste numberU154 (Ignitable waste).

**Section 14 - Transport Information**

<table>
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<tr>
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<th>US DOT</th>
<th>IATA</th>
<th>RID/ADR</th>
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<td><strong>Additional Info:</strong></td>
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<td>FLASHPOI 11 C</td>
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</table>

**Section 15 - Regulatory Information**

**US FEDERAL**

**TSCA**  
CAS# 67-56-1 is listed on the TSCA inventory.

**Health & Safety Reporting List**  
None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules**  
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ)
CAS# 67-56-1: final RQ = 5000 pounds (2270 kg)

Section 302 (TPQ)
None of the chemicals in this product have a TPQ.

SARA Codes
CAS # 67-56-1: acute, flammable.

Section 313
This material contains Methyl alcohol (CAS# 67-56-1, 99%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:
CAS# 67-56-1 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

Clean Water Act:
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.

OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

STATE
CAS# 67-56-1 can be found on the following state right to know lists:
California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.
California No Significant Risk Level: None of the chemicals in this product are listed. European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
T F
Risk Phrases:
R 11 Highly flammable. R 23/25 Toxic by inhalation and if swallowed.
Safety Phrases:
S 16 Keep away from sources of ignition - No smoking. S 24 Avoid contact with skin. S 45 In case of accident of if you feel unwell, seek medical advice immediately (show the label where possible). S 7 Keep container tightly closed.

WGK (Water Danger/Protection)
CAS# 67-56-1: 1

Canada
CAS# 67-56-1 is listed on Canada's DSL/NDSL List.
This product has a WHMIS classification of B2, D1A, D2B.
CAS# 67-56-1 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits
CAS# 67-56-1: OEL-ARAB Republic of Egypt:TWA 200 ppm (260 mg/m3); Skin OEL-AUSTRALIA:TWA 200 ppm (260 mg/m3); STEL 250 ppm; Skin OEL-BELGIU M:TWA 200 ppm (262 mg/m3); STEL 250 ppm; Skin OEL-CZECHOSLOVAKIA:TWA 10 0 mg/m3; STEL 500 mg/m3 OEL-DENMARK:TWA 200 ppm (260 mg/m3); Skin OEL-FINLAND:TWA 200 ppm (260 mg/m3); STEL 250 ppm; Skin OEL-FRANCE:TWA
200 ppm (260 mg/m3); STEL 1000 ppm (1300 mg/m3) OEL-GERMANY:TWA 200 ppm (260 mg/m3); Skin OEL-HUNGARY:TWA 50 mg/m3; STEL 100 mg/m3; Skin JAN9 OEL-JAPAN:TWA 200 ppm (260 mg/m3); Skin OEL-THE NETHERLANDS:TWA 200 ppm (260 mg/m3); Skin OEL-THE PHILIPPINES:TWA 200 ppm (260 mg/m3) OEL-POLAND TWA 100 mg/m3 OEL-RUSSIA:TWA 200 ppm; STEL 5 mg/m3; Skin OEL-SWEDEN: TWA 200 ppm (250 mg/m3); STEL 250 ppm (350 mg/m3); Skin OEL-SWITZERLAND: TWA 200 ppm (260 mg/m3); STEL 400 ppm; Skin OEL-TURKEY: TWA 200 ppm (260 mg/m3) OEL-UNITED KINGDOM: TW A 200 ppm (260 mg/m3); STEL 250 ppm; Skin OEL IN BULGARIA, COLOMBIA, JO RDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGIH TLV

Section 16 - Additional Information

MSDS Creation Date: 3/14/1995
Revision #39 Date: 12/12/1997
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