

**Material Safety Data Sheet  
Instant Anaerobe Reagent A  
Potassium Methoxide Solution**

**SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**MSDS Name:** Potassium Methoxide Methanol

**MSDS Preparation Date:** June 26, 2009

**Synonyms or Generic ID for Potassium Methoxide:** Potassium methylate

**Synonyms or Generic ID for Methanol:** Carbinol; Methyl alcohol; Methyl hydroxide;  
Monohydroxymethane; Wood alcohol; Wood naphtha; Wood spirits; Columbian spirits; Methanol.

**Chemical Family:** Methanol Family

**Formula:** KOCH<sub>3</sub> in CH<sub>3</sub>OH

**Molecular Weight:** N/A

**Company Identification:**

MIDI Inc.

125 Sandy Drive

Newark, DE 19713

**For Information, call:** (800) 276-8068, (302) 737-4297

**For Domestic CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

**SECTION 2 – COMPOSITION, INFORMATION ON INGREDIENTS**

CAS #	Chemical Name	Percent	EINECS/ELINCS	Hazards
865-33-8	Potassium Methoxide	< 5%	212-736-1	Corrosive, Flammable
67-56-1	Methanol	>95%	200-659-6	Irritant, Flammable
7732-18-5	Water	<1%	231-791-2	None

**NFPA Rating:** (estimated) Health: 3; Flammability: 3; Instability: 2

State: Liquid	Appearance: colorless, occasional precipitate formation	Odor: Alcohol-like, weak odor
Boiling Point: 148°F (methanol)	pH: Not available	Specific Gravity: Not Available
Vapor Pressure (mm Hg): Not Available	Vapor Density (AIR=1): Not Available	
Flash Point: 52°F (Potassium Methoxide)	Solubility in Water: Not Available	

**SECTION 3 – HAZARDS IDENTIFICATION**

**Appearance:** Colorless liquid with occasional precipitate formation, methanol odor. Flash Point: 52 deg F.

**Danger!** Unstable Reactive, Corrosive! Poison! May be fatal or cause blindness if swallowed. Vapor harmful. **Flammable liquid and vapor.** Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye, skin, and respiratory tract irritation. May cause central nervous system depression. Cannot be made non-poisonous.

**Target Organs:** Eyes, nervous system, optic nerve.

**Material Safety Data Sheet**  
**Instant Anaerobe Reagent A**  
**Potassium Methoxide Solution**

**Potential Health Effects**

**Eye:** Causes eye burns. May cause painful sensitization to light. Methanol is a mild to moderate eye irritant. Inhalation, ingestion, or skin absorption of methanol can cause significant disturbances in vision, including blindness.

**Skin:** Causes skin burns. May be absorbed through the skin in harmful amounts. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. Methanol can be absorbed through the skin, producing systemic effects that include visual disturbances.

**Ingestion:** Causes burns. May be fatal or cause blindness if swallowed. Aspiration hazard. Cannot be made non-poisonous. May cause gastrointestinal irritation with nausea, vomiting, and diarrhea. May cause systemic toxicity with acidosis. 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 cardiopulmonary system effects.

**Inhalation:** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Methanol is toxic and can very readily form extremely high vapor concentrations at room temperature. Inhalation is the most common route of occupational exposure. At first, methanol causes CNS depression with nausea, headache, vomiting, dizziness, and incoordination. A time period with no obvious symptoms follows (typically 8 – 24 hrs). This latent period is followed by metabolic acidosis and severe visual effects which may include reduced reactivity and/or increased sensitivity to light, blurred, double, and/or snowy vision, and blindness. Depending on the severity of the exposure and the promptness of treatment, survivors may recover completely or may have permanent blindness, vision disturbances and/or nervous system effects.

**Chronic:** Prolonged or repeated skin contact may cause dermatitis. Chronic exposure may cause effects similar to those of acute exposure. Methanol is only very slowly eliminated from the body. Because of this slow elimination, methanol should be regarded as a cumulative poison. Though a single exposure may cause no effect, daily exposures may result in the accumulation of a harmful amount. Methanol has produced fetotoxicity in rats and tetragenicity in mice exposed by inhalation to high concentrations that did not produce significant maternal toxicity.

<b>SECTION 4 – FIRST AID MEASURES</b>
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**Eyes:** Get medical aid immediately. Continue rinsing eyes during transport to hospital. Flush thoroughly with water for at least 15 minutes. Do NOT allow victim to rub or keep eyes closed. **SPEEDY ACTION IS CRITICAL.**

**Skin:** Take off contaminated clothing and shoes immediately. Flush skin with copious quantities of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Consult a physician.

**Ingestion:** Get medical aid immediately. Do NOT induce vomiting. Potential for aspiration if swallowed. Never give anything by mouth to an unconscious person. Rinse mouth with water. If vomiting occurs naturally, have victim lean forward.

**Inhalation:** Get medical aid immediately. Remove patient to fresh air. Administer oxygen supply if breathing is difficult. Administer artificial respiration if breathing has ceased. Call a physician.

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

<b>SECTION 5 – FIRE FIGHTING MEASURES</b>
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**General Information:** Ethanol may inhibit methanol metabolism. As in any fire, wear self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use extinguishing powder. Do not use water. Vapors are heavier than air and may travel to source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

**Flash Point :** 11°C/ 52°F – closed cup

**Extinguishing Media:** Use Carbon dioxide (CO<sub>2</sub>) Dry powder

**NFPA Rating:** (estimated) Health: 3, Flammability: 3, Instability: 2

**Material Safety Data Sheet  
Instant Anaerobe Reagent A  
Potassium Methoxide Solution**

**Special Hazards:** Reacts violently with water. In case of fire, the following can be released: carbon monoxide and carbon dioxide, flammable gases/vapors, and corrosive gases/vapors.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES**

**General Information: SUBSTANCE IS FLAMMABLE.** Remove any ignition sources until the area is determined to be free from explosion or fire hazards. Evacuate personnel to safe areas. Use proper personal protective equipment as indicated in Section 8. Ensure adequate ventilation. Contain the release and eliminate its source, if this can be done without risk. Take up and contain material for proper disposal as described under disposal. Comply with Federal, State and local regulations on reporting releases.

**Spills/Leaks:** Use neutralizing agent. Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Ensure adequate ventilation. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, vermiculite. Do not use combustible materials such as sawdust. Use a spark-proof tool. Do not flush with water or aqueous cleaning agents. A vapor suppressing foam may be used to reduce vapors. Do not flush with water. Keep in suitable, closed containers for disposal. Do not let product enter drains.

**SECTION 7-HANDLING AND STORAGE**

**HANDLING:** Wash thoroughly after handling. Remove contaminated clothing and wash before re-use. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks, or open flames. Use only with adequate ventilation. Keep away from heat, sparks, and flame. Avoid use in confined spaces. Avoid formation of dust and aerosols. Take measures to prevent the build-up of electrostatic charge. Ensure good ventilation at the workplace.

**Storage:** Store in a tightly closed container. Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well ventilated area away from incompatible substances. Never allow product to get in contact with water during storage.

**SECTION 8 – EXPOSURE CONTROL/ PERSONAL PROTECTION**

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below permissible exposure.

Chemical Name	ACGIH	NIOSH	OSHA – Final PELs
Methanol	200 ppm TWA; 250 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous route	200 ppm TWA; 260 mg/m <sup>3</sup> TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m <sup>3</sup> TWA
Potassium methoxide	None listed	None listed	None listed
Water	None listed	None listed	None listed

**OSHA Vacated PELs:** Potassium Methoxide in Methanol - Methyl alcohol: 200 ppm TWA; 260 mg/m<sup>3</sup> TWA Potassium methoxide: No OSHA Vacated PELs are listed for this chemical. Water: No OSHA Vacated PELs are listed for this chemical.

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

**Material Safety Data Sheet**  
**Instant Anaerobe Reagent A**  
**Potassium Methoxide Solution**

**Skin:** Wear appropriate protective chemical resistant gloves to prevent skin exposure.

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

**Ventilation:** Normal room ventilation is adequate.

**Other Protective Equipment:** Make eye bath and emergency shower available.

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Liquid

**Appearance:** Colorless

**Odor:** Alcohol-like, weak odor

**Freezing/Melting Points:** Not determined

**Boiling Point:** Not determined

**Specific Gravity (H<sub>2</sub>O = 1):** Not determined

**Appearance:** Clear, colorless

**Solubility:** Avoid contact with water

**Vapor Pressure (mm Hg):** Not Available

**Vapor Density (air =1):** Not Available

**Evaporation Rate:** Not Available

**Molecular Formula:** Mixture

**Molecular Weight:** Not available

**Viscosity:** Not Available

**SECTION 10 – STABILITY AND REACTIVITY**

**Chemical Stability:** Stable under recommended storage conditions

**Conditions to Avoid:** Do not allow water to enter container. Avoid air, heat, flames, sparks, and exposure to moisture. Avoid excess heat and contact with ignition sources. Avoid confined spaces.

**Incompatibilities with Other Materials:** Acids, water, oxidizing agents, oxygen, reducing agents, acids, alkali metals, potassium, sodium, metals as powders (e.g. hafnium, raney nickel), acid anhydrides, acid chlorides, powdered aluminum, powdered magnesium.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, formaldehyde, potassium oxides.

**Hazardous reactions:** Reacts violently with water.

**Hazardous polymerization:** Has not been reported.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

**Potassium Methoxide**

**CAS#:** 865-33-8

**LD50/LC50:** No data available

**Carcinogenicity:** Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA

**Epidemiology:** No data available

**Teratogenicity:** No data available

**Reproductive Effects:** No data available

**Neurotoxicity:** No data available

**Mutagenicity:** No data available

**Acute Toxicity:**

**Primary irritant effect:**

**On the skin:**

Corrosive effect on skin and mucous membranes. Irritant to skin and mucous membranes.

**On the eye:**

Strong corrosive effect. Irritating Effect.

**Material Safety Data Sheet**  
**Instant Anaerobe Reagent A**  
**Potassium Methoxide Solution**

**Sensitization:** No sensitizing effects known.

**Subacute to chronic toxicity:** The toxicity of potassium compounds is generally due to the anion. Corrosive materials are acutely destructive to the respiratory tract, eyes, skin, and digestive tract. Eye contact may result in permanent damage and complete vision loss. Inhalation may result in respiratory effects such as inflammation, edema, and chemical pneumonitis. May cause coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Ingestion may cause damage to the mouth, throat, and esophagus. May cause skin burns or irritation depending on the severity of the exposure. Methanol, if present or generated, may cause intoxication, headache, drowsiness, nausea, vomiting, blurred vision, blindness, coma, and death. Methanol is a defatting agent and can cause skin and eye irritation. Absorption through the skin is possible. Chronic exposure may cause liver and eye injury.

**Additional toxicological information:** Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA, OR ACGIH.

**Methanol**

**CAS#:** 67-56-1: PC140000

**LD50/LC50:**

Draize Test, rabbit, eye: 40mg Moderate;

Draize Test, rabbit eye: 100mg/24H Moderate

Draize Test, rabbit skin: 20mg/24H Moderate

Inhalation, rabbit: LC50 = 81000mg/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 = 5600mg/kg

Skin/rabbit: LD50 = 15800 mg/kg

Human LDLo Oral: 143 mg/kg; Human LDLo Oral: 428 mg/kg; Human TCLO Inhalation; 300 ppm caused visual field changes & headache; Monkey LDLo Skin: 393 mg/kg. Methanol is significantly less toxic to most experimental animals than humans, because most animal species metabolize methanol differently.

Non-primate species do not ordinarily show symptoms of metabolic acidosis or the visual effects which have been observed in primates and humans.

**Carcinogenicity:** Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found

**Teratogenicity:** There is no human information available. Methanol is considered to be a potential developmental hazard based on animal data. In animal experiments, methanol has caused fetotoxic or teratogenic effects without maternal toxicity.

**Reproductive Effects:** See actual entry in RTECS for complete information.

**Mutagenicity:** See actual entry in RTECS for complete information.

**Neurotoxicity:** ACGIH cites neuropathy, vision and CNS under TLV basis.

**SECTION 12 – ECOLOGICAL INFORMATION**

**General notes:** Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewage system. Do not allow material to be released to the environment without proper governmental permits.

**SECTION 13 – DISPOSAL CONSIDERATIONS**

**Product:**

**Recommendation:** Consult state, local, or national regulations to ensure proper disposal.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**Material Safety Data Sheet  
Instant Anaerobe Reagent A  
Potassium Methoxide Solution**

**SECTION 14 – TRANSPORT INFORMATION**

	<b>US DOT</b>
<b>Shipping Name:</b>	Alcoholates solution, N.O.S., in alcohol
<b>Hazard Class:</b>	3
<b>UN Number:</b>	UN3274
<b>Packing Group:</b>	II

**SECTION 15 – REGULATORY INFORMATION**

**US FEDERAL**

**TSCA**

CAS# 67-56-1 is listed on the TSCA inventory.  
CAS# 865-33-8 is listed on the TSCA inventory.  
CAS# 7732-18-5 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.

**CERCLA Hazardous Substances and corresponding RQs**

CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

**SARA Section 302 Extremely Hazardous Substances**

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

**SARA Codes**

CAS # 67-56-1: immediate, fire.  
CAS # 865-33-8: reactivity hazard, acute health hazard

**Section 313**

This material contains Methyl alcohol (CAS# 67-56-1, 92.5-99.3%), 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:**

CAS# 67-56-1 is listed as a Hazardous Substance 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: Massachusetts, Minnesota, New Jersey, New York, Pennsylvania, Rhode Island.

CAS# 865-33-8 is not present on the following state right to know lists: California, Massachusetts, Minnesota, New Jersey, New York, Pennsylvania, Rhode Island.

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

**Material Safety Data Sheet  
Instant Anaerobe Reagent A  
Potassium Methoxide Solution**

**California Prop 65**

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 C

**Risk Phrases:**

R 11 Highly flammable.

R 14 Reacts violently with water.

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R 34 Causes burns.

R 39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

**Safety Phrases:**

S 7 Keep container tightly closed.

S 8 Keep container dry.

S 16 Keep away from sources of ignition - No smoking.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37 Wear suitable protective clothing and gloves.

S 43 In case of fire, use powdered extinguishing agent. Never use water.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**WGK (Water Danger/Protection)**

CAS# 67-56-1: 1

CAS# 865-33-8: No information available.

CAS# 7732-18-5: No information available.

**Canada - DSL/NDSL**

CAS# 67-56-1 is listed on Canada's DSL List.

CAS# 865-33-8 is listed on Canada's NDSL List.

CAS# 7732-18-5 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of B2, D1B, D2B, E.

**Canadian Ingredient Disclosure List**

CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.

<b>SECTION 16 – Other Information</b>
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This Material Safety Data Sheet has been prepared in accordance with 29 CFR 1910.1200 and contains information believed to be accurate and complete at the date of preparation. The statements contained herein are offered for informational purposes only and are based upon technical data. MIDI Inc. believes them to be accurate but does not purport to be all-inclusive. The above-stated product is intended for use only by persons having the necessary technical skills and facilities for handling the product at their discretion and risk. Since conditions and manner of use are outside our control, we (MIDI Inc.) make no warranty of merchantability or any such warranty, express or implied with respect to information and we assume no liability resulting from the above product or its use. Users should make their own investigations to determine suitability of information and product for their particular purposes.