

BBC Biochemical

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

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| Common Name: Methyl Alcohol | Code: 9941 |
| Supplier: BBC Biochemical | MSDS#: 9941 |
| Synonym: Wood alcohol, Methanol, Carbinol, | Validation Date: 4-17-09 |
| Trade Name: Alcohol | Print Date: 4-17-09 |
| Material Uses: Solvent, Dehydratant | Responsible Name: Dr. B |
| Manufacturer: BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477 | In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477 |

Section 2. Composition and Information on Ingredients

| Name | CAS# | % by Weight | OSHA PEL/ACGIH TLV |
|-------------------|---------|-------------|--------------------|
| 1) Methyl Alcohol | 67-56-1 | 100% | 200 ppm/200 ppm |

Section 3. Hazards Identification

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| Physical State and Appearance | Colorless liquid, characteristic alcoholic odor. |
| Emergency Overview | Poison! Flammable liquid and vapor. May be fatal or cause blindness if swallowed. Avoid prolonged breathing of vapors. Avoid contact with eyes and skin. Cannot be made non-poisonous. May cause damage to lungs and central nervous system. Absorption through skin may be harmful. |
| Routes of Entry | Inhalation, ingestion or skin contact. |
| Potential Acute Health Effects | |
| Eyes | Liquid or vapor may cause eye irritation. Continued exposure may cause eye lesions. |
| Skin | Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation or dermatitis (rash). |
| Inhalation | Excessive exposure to this product may cause headache, CNS depression, drowsiness, dizziness, loss of appetite, irritation of the respiratory tract, drunkenness, unconsciousness, or death. |
| Ingestion | Poisonous! May be fatal or cause blindness if swallowed. Ingestion may have a narcotic effect including signs of CNS depression such as dizziness, headache, drowsiness, loss of coordination, and fatigue. |
| Potential Chronic Health Effects | Marked impairment of vision has been reported. Repeated or prolonged exposure may cause skin irritation. |
| Medical Conditions Aggravated by Overexposure | Preexisting eye, skin and respiratory conditions may be aggravated by exposure to this product. |
| Overexposure/Signs/Symptoms | Shortness of breath, confused behavior, redness of skin, swelling of tissues, watery eyes, and nausea. |

Section 4. First Aid Measures

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| Eye Contact | Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention. |
| Skin Contact | Remove contaminated clothing and shoes. Flush skin with water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. |
| Inhalation | Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. |
| Ingestion | Do not give liquids if victim is unconscious or drowsy. Otherwise, give two glasses of water to dilute chemical. Seek medical attention. Do not induce vomiting. |
| Notes to Physician | Not available. |

Section 5. Fire Fighting Measures

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| Flammability of the Product | Flammable liquid and vapor. |
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| Auto-ignition Temperature | 464°C (867°F) |
| Flash Points | 12° C (52° F) |
| Flammable Limits | LEL: 6.00%; UEL: 36.00% |
| Products of Combustion | Not available. |
| Fire Hazards in Presence Of Various Substances | Not available. |
| Explosion Hazards in Presence of Various Substances | Not available. |
| Fire Fighting Media and Instructions | "Alcohol" foam, dry chemical, or CO ² . Clear fire area of unprotected personnel. Cool fire exposed containers with water. |
| Protective Clothing (Fire) | Do not enter confined fire space without full bunker gear, including a positive pressure NIOSH approved SCBA. |
| Special Remarks on Fire Hazards | When heated above the flash point this material emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mist or spray may be flammable at temperatures below the flash point. |
| Special Remarks on Explosion Hazards | Carbon monoxide and unidentified organic compounds may be formed during combustion. |

Section 6. Accidental Release Measures

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| Small Spill and Leak | Ventilate area of leak or spill. Remove all sources of ignition. Clean-up personnel require protective clothing and respiratory protection from vapors. Only specially trained or qualified personnel should handle the emergency. |
| Large Spill and Leak | Same as above. |

Section 7, Handling and Storage

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| Handling | Surfaces that are hot may ignite liquid even in the absence of sparks or flame. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapors are gone. |
| Storage | Keep away from heat, sparks, and flame. Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. |

Section 8. Exposure Controls / Personal Protection

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| Engineering Controls | Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. |
| Personal Protection | |
| Eyes | Use chemical safety goggles and/or full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas. |
| Body | Wear impervious protective clothing if there is a potential for skin contact. |
| Respiratory | If exposure exceeds occupational exposure limits use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors. |
| Hands | Neoprene, Nitrile or natural rubber gloves. |
| Feet | Impervious footwear. |
| Personal Protection in Case of a Large Spill | |
| Product Name | Exposure Limits |
| 1)Methyl Alcohol | OSHA PEL 200 ppm TWA; ACGIH TLV 200ppm TWA, 250ppm STEL Skin |
| 2) | |
| 3) | |
| Consult Local authorities before acceptable exposure limits. | |

Section 9. Physical and Chemical Properties

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| Physical State and Appearance | Clear, colorless liquid. | Odor: | Characteristic odor. |
| Molecular Weight | 32.04 | Taste: | Not available. |
| Molecular Formula | CH ₃ OH | Color: | Colorless. |
| pH (1%/Water) | Not applicable. | | |
| Boiling/Condensation Point | Not applicable. | | |
| Melting/Freezing Point | -98° C (-144°F)/Not applicable. | | |
| Critical Temperature | Not applicable. | | |
| Specific Gravity | 0.79 | | |
| Vapor Pressure | 96 mmHg. @ 20°C | | |

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| Vapor Density | Heavier than air. |
| Volatility | 100% |
| Odor Threshold | Not applicable. |
| Evaporation Rate | Slower than ether. |
| VOC | Not available. |
| Viscosity | Not available. |
| Ionicity (in water) | Not available. |
| Dispersion Properties | Not available. |
| Solubility | Soluble in water. |
| Physical Chemical Comments | Not available. |

Section 10. Stability and Reactivity

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| Stability and Reactivity | Stable. |
| Conditions of Instability | Avoid heat, flame, and other sources of ignition. |
| Incompatibility with Various Substances | Strong oxidizers. |
| Hazardous Decomposition Products | None. |
| Hazardous Polymerization | Will not occur. |

Section 11. Toxicological Information

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| Toxicity to Animals | LD50: Oral rat: 5628 mg/kg; Skin rabbit 15800 mg/kg LC50: Inhalation rate: 64000 ppm/4H |
| Chronic Effects on Humans | Poison. May be fatal or cause blindness if swallowed. Cannot be made unpoisonous. |
| Other Toxic Effects on Humans | Methyl alcohol is listed as a toxic chemical on the SARA Title III, Sec. 313 list. For Sec. 311/312 reporting, methyl alcohol is listed as an immediate (acute) health hazard, and a fire hazard. None of the chemicals in this product are found on the extremely hazardous substance list. |
| Special Remarks on Toxicity to Animals | Not available. |
| Special Remarks on Chronic Effects on Humans | Not available. |
| Special Remarks on Other Toxic Effects on Humans | Not available. |

Section 12. Ecological Information

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| Ecotoxicity | 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. |
| BODS and COD | Not available. |
| Biodegradable/OEDC | Not available. |
| Mobility | Not available. |
| Toxicity of the Products of Biodegradation | Not available. |
| Special Remarks on The Products of Biodegradation | Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill response plan should be developed and implemented. |

Section 13. Disposal Considerations

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| Waste Information | 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. |
| Waste Stream | Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to |

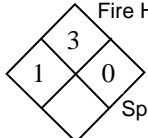
a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Consult your local or regional authorities.

Section 14. Transport Information

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| DOT Classification | Domestic (Land, D.O.T.) ----- Proper Shipping Name: METHANOL Hazard Class: 3 UN/NA: UN1230 Packing Group: II Information reported for product/size: 358LB International (Water, I.M.O.) ----- Proper Shipping Name: METHANOL Hazard Class: 3, 6.1 UN/NA: UN1230 Packing Group: II Information reported for product/size: 358LB |
| Marine Pollutant | Not available. |
| Hazardous Substances Reportable Quantity | Not available. |
| Special Provisions for Transport | Not applicable. |
| TDG Classification | Proper Shipping Name: METHANOL Hazard Class: 3 UN/NA: UN1230 Packing Group: II Information reported for product/size: 358LB |
| ADR/RID Classification | ADR (Europe) Information not available. |
| IMO/IMDG Classification | IMDG Information not available. |
| ICAO/IATA Classification | See IATA Regulations Proper Shipping Name: METHANOL Hazard Class: 3, 6.1 UN/NA: UN1230 Packing Group: II Information reported for product/size: 358LB |

Section 15. Other Information

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| Label requirements | |
| Hazardous Material Information System (U.S.A.) | Health 1 |
| | Fire Hazard 3 |
| | Reactivity 0 |
| | Personal Protection |
| National Fire Protection Association (U.S.A.) |  <p>Fire Hazard Reactivity Specific Hazard</p> |
| References | |
| Other Special Considerations | |
| Notice to Reader | |
| To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. | |