

BBC Biochemical MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

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| Common Name: | EA-50 | Code: | 4650, 4660, 4670 |
| Supplier: | BBC Biochemical 8510 Cedarhome Dr. NW Stanwood, WA 98292 | MSDS#: | 4600 |
| Synonym: | EA-65 | Validation Date: | 9-1-07 |
| Trade Name: | Not Available | Print Date: | 9-1-07 |
| Material Uses: | Tissue Staining | Responsible Name: | Dr. B |
| Manufacturer: | BBC Biochemical 8510 Cedarhome Dr. Stanwood, WA 98292 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 | OSHA/STEL |
|------------------------------|-----------|-------------|----------|------------------|
| 1) Water | 1737-87-1 | N/A | | |
| 2) Denatured Ethanol Mixture | | | | |
| Ethyl Alcohol | 64-17-5 | N/A | 1000 ppm | None established |
| Methyl Alcohol | 67-56-1 | N/A | 200 ppm | 250 ppm |
| Denaturing Alcohol | 67-63-0 | N/A | 400 ppm | 500 ppm |
| 3) Selected Stains | N/A | N/A | | |
| 4) Glacial Acetic Acid | 64-19-7 | N/A | 10 ppm | 15 ppm |

Section 3. Hazards Identification

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| Physical State and Appearance | Brown liquid. |
| Emergency Overview | Not available. |
| Routes of Entry | May be harmful by inhalation, ingestion or skin absorption. |
| Potential Acute Health Effects | |
| Eyes | Slightly hazardous in case of eye contact (irritant). |
| Skin | Slightly hazardous in case of skin contact (irritant). |
| Inhalation | May cause dizziness, headache, nausea, and narcosis. |
| Ingestion | May cause blindness, nausea, damage to gastrointestinal tract, liver, kidneys, and cardiovascular system. |
| Potential Chronic Health Effects | Not Available. |
| Medical Conditions Aggravated by Overexposure | Repeated or prolonged exposure is not known to aggravate medical condition. |
| Overexposure/Signs/Symptoms | Loss of appetite, inability to concentrate. Headache, irritation of eyes, nose, throat. |

Section 4. First Aid Measures

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| Eye Contact | Immediately flush eyes with copious amounts of water for at least 15 minutes. |
| Skin Contact | Immediately wash skin with soap and copious amounts of water. |
| Inhalation | Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen. |
| Ingestion | Wash out mouth with water provided person is conscious. Loosen clothing such as a collar, tie, belt or waistband. Induce vomiting. Provided person is conscious, have victim drink several glasses of water or milk. |
| Notes to Physician | Not available. |

Section 5. Fire Fighting Measures

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| Flammability of the Product | Flammable. |
| Auto-ignition Temperature | 362.78°C (685°F) |
| Flash Points | CLOSED CUP: 12.778°C (55°F) |
| Flammable Limits | The greatest known range is LOWER: 3.3% UPPER: 19% (Ethyl Alcohol) |
| Products of Combustion | These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...), sulfur oxides (SO ₂ , SO ₃ ...). Some metallic oxides. |

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| Fire Hazards in Presence Of Various Substances | Not available. |
| Explosion Hazards in Presence of Various Substances | Vapor may travel considerable distance to source of ignition and flash back. |
| Fire Fighting Media and Instructions | Carbon dioxide, dry chemical powder or appropriate foam. Water spray. |
| Protective Clothing (Fire) | Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. |
| Special Remarks on Fire Hazards | Emits toxic fumes under fire conditions. |
| Special Remarks on Explosion Hazards | Vapor may travel considerable distance to source of ignition and flash back. |

Section 6. Accidental Release Measures

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| Small Spill and Leak | Evacuate area. Shut off all sources of ignition. Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. |
| Large Spill and Leak | Evacuate area. Shut off all sources of ignition. Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete. |

Section 7, Handling and Storage

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| Handling | Avoid prolonged exposure or repeated exposure. See section 8. |
| Storage | Keep away from heat, sparks, and open flame. Store in a cool dry place. |

Section 8. Exposure Controls / Personal Protection

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| Engineering Controls | Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location. |
| Personal Protection | |
| Eyes | Safety goggles required. |
| Body | Protective clothing advised. Lab coat. |
| Respiratory | Wear appropriate NIOSH/MSHA-approved respirator. |
| Hands | Chemical resistant gloves. |
| Feet | Rubber boots advised. |
| Personal Protection in Case of a Large Spill | Same as above. |
| Product Name | Exposure Limits |
| 1) | |
| 2) | |
| 3) | |
| Consult Local authorities before acceptable exposure limits. | |

Section 9. Physical and Chemical Properties

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| Physical State and Appearance | Brown Liquid. | Odor: | Alcohol like. |
| Molecular Weight | Not applicable. | Taste: | Not available. |
| Molecular Formula | Not applicable. | Color: | Dark brown red. |
| pH (1%/Water) | Not applicable. | | |
| Boiling/Condensation Point | 78.333°C (173°F) | | |
| Melting/Freezing Point | May start to solidify at -89.5°C (-129.1°F) based on data for Ethyl alcohol. | | |
| Critical Temperature | Not applicable. | | |
| Specific Gravity | 0.800 | | |
| Vapor Pressure | Not applicable. | | |
| Vapor Density | Not applicable. | | |
| Volatility | Not applicable. | | |
| Odor Threshold | Not applicable. | | |
| Evaporation Rate | Not applicable. | | |
| VOC | Not available. | | |
| Viscosity | Not available. | | |
| Ionicity (in water) | Not available. | | |
| Dispersion Properties | Not available. | | |
| Solubility | Soluble in cold water. | | |
| Physical Chemical Comments | Not available. | | |

Section 10. Stability and Reactivity

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| Stability and Reactivity | Stable. |
| Conditions of Instability | Not available. |
| Incompatibility with Various Substances | Incompatible with strong oxidizing agents. |
| Hazardous Decomposition Products | Not available. |
| Hazardous Polymerization | Not available. |

Section 11. Toxicological Information

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| Toxicity to Animals | LD50: Not available. LC50: Not available. |
| Chronic Effects on Humans | May be harmful by inhalation, ingestion, or skin absorption. |
| Other Toxic Effects on Humans | To the best of our knowledge, the chemical, physical, and toxicological properties have not be thoroughly investigated. |
| Special Remarks on Toxicity to Animals | Not available. |
| Special Remarks on Chronic Effects on Humans | Human: Passes through the placenta, excreted in maternal milk. (Ethyl Alcohol) |
| Special Remarks on Other Toxic Effects on Humans | Not available. |

Section 12. Ecological Information

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| Ecotoxicity | Not available. |
| BODS and COD | Not available. |
| Biodegradable/OEDC Mobility | Not available. |
| Toxicity of the Products of Biodegradation | The product itself and its products of degradation are not toxic. |
| Special Remarks on The Products of Biodegradation | Not available. |

Section 13. Disposal Considerations

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| Waste Information | Not available. |
| Waste Stream | Not available. |
| Consult your local or regional authorities. | |

Section 14. Transport Information

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| DOT Classification | Class 3: Flammable Liquid. |
| Marine Pollutant | Not available. |
| Hazardous Substances Reportable Quantity | Not available. |
| Special Provisions for Transport | Not applicable. |
| TDG Classification | Class 3: Flammable Liquid. |
| ADR/RID Classification | Class 3: Flammable Liquid A. |
| IMO/IMDG Classification | Class 3.1 Flammable Liquid (Low flashpoint group of liquids having a flashpoint below -18°C (0°F) c.c.). |
| ICAO/IATA Classification | Class 3: Flammable Liquid. |

Section 15. Other Information

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| Label requirements | HIGHLY FLAMMABLE LIQUID AND VAPOR, VAPOR MAY CAUSE FLASH FIRE. CONTAINS MATERIAL WHICH MAY CAUSE BLOOD, NERVOUS SYSTEM, REPRODUCTIVE SYSTEM, LIVER, RESPIRATORY TRACT, SKIN, EYES DAMAGE. | | |
| Hazardous Material Information System (U.S.A.) | Health | 2 | National Fire Protection Association (U.S.A.) |
| | Fire Hazard | 3 | |
| | Reactivity | 0 | |
| | Personal Protection | a | |
| | | | |
| References | | | |
| Other Special Considerations | | | |

Notice to Reader

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