

# EASTMAN

## MATERIAL SAFETY DATA SHEET

Revision Date: 01/30/2007

MSDSUSA/ANSI/EN/15000000130/Version 8.1

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

|   |  |
|---|--|
| <b>Product Name</b>                     | Eastman(TM) EB Solvent   |
| <b>Product Identification Number(s)</b> | 00650-00, P0065000, P0065001, P0065002, P0065003, P0065004, P0065005, P0065006, P006500N, E00650E1, E00650E2, E00650E3, P0065007, P0065008 |
| <b>Manufacturer/Supplier</b>            | Eastman Chemical Company<br>200 South Wilcox Drive<br>Kingsport, TN 37660-5280<br>US<br>+14232292000                                       |
| <b>MSDS Prepared by</b>                 | Eastman Product Safety and Health  |
| <b>Chemical Name</b>                    | 2-butoxyethanol  |
| <b>Synonym(s)</b>                       | 00650-00 902270  |
| <b>Molecular Formula</b>                | C6H14O2  |
| <b>Molecular Weight</b>                 | 118.18   |
| <b>Product Use</b>                      | solvent  |
| <b>OSHA Status</b>                      | hazardous  |

For emergency health, safety & environmental information, call 800-EASTMAN.

For emergency transportation information, call CHEMTREC at 800-424-9300 or call 800-EASTMAN.

### 2. COMPOSITION INFORMATION ON INGREDIENTS

(Typical composition is given, and it may vary. A certificate of analysis can be provided, if available.)

| <u>Weight %</u> | <u>Component</u> | <u>CAS Registry No.</u> |
|-----------------|------------------|-------------------------|
| 100%            | 2-butoxyethanol  | 111-76-2                |

### 3. HAZARDS IDENTIFICATION

WARNING!  
HARMFUL IF INHALED OR ABSORBED THROUGH SKIN  
CAUSES SKIN AND EYE IRRITATION  
MAY CAUSE BLOOD DISORDERS BASED ON ANIMAL DATA  
COMBUSTIBLE LIQUID AND VAPOR  
PEROXIDE FORMER

**HMIS® Hazard Ratings:** Health - 2\*, Flammability -2, Chemical Reactivity - 0

*HMIS® rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.*

### 4. FIRST-AID MEASURES

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- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- Eyes:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
- Skin:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
- Ingestion:** Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

### **5. FIRE FIGHTING MEASURES**

- Extinguishing Media:** water spray, dry chemical, carbon dioxide, alcohol foam
- Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and protective clothing. Use water spray to keep fire-exposed containers cool.
- Hazardous Combustion Products:** carbon dioxide, carbon monoxide
- Unusual Fire and Explosion Hazards:** Forms peroxides of unknown stability. Combustible.

### **6. ACCIDENTAL RELEASE MEASURES**

- Wear appropriate personal protective equipment. Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.
- For Large Spills:** Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams.

### **7. HANDLING AND STORAGE**

- Personal Precautionary Measures:** Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.
- Prevention of Fire and Explosion:** Keep away from heat and flame. Keep from contact with oxidizing materials. Minimize exposure to air. After opening, purge container with nitrogen before reclosing. If peroxide formation is suspected, do not open or move container. Do not distill to near dryness. Addition of water or appropriate reducing materials will lessen peroxide formation.
- Storage:** Keep container closed.
- Additional Information:** Store away from heat and light.

### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

*Country specific exposure limits have not been established or are not applicable unless listed below.*

**2-BUTOXYETHANOL (EGBE)**

US. ACGIH Threshold Limit Values  
Time Weighted Average (TWA): 20 ppm,

**2-BUTOXYETHANOL**

US. NIOSH: Pocket Guide to Chemical Hazards  
Recommended exposure limit (REL): 5 ppm, 24 mg/m<sup>3</sup>  
US. NIOSH: Pocket Guide to Chemical Hazards

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Skin designation: Can be absorbed through the skin.  
US. OSHA Table Z-1 Limits for Air Contaminants ( 29 CFR 1910.1000)  
PEL: 50 ppm, 240 mg/m<sup>3</sup>  
US. OSHA Table Z-1 Limits for Air Contaminants ( 29 CFR 1910.1000)  
Skin designation: Can be absorbed through the skin.  
US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants  
Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 25 ppm, 120 mg/m<sup>3</sup>  
US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants  
Skin designation: Can be absorbed through the skin.

**Ventilation:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Respiratory Protection:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

**Eye Protection:** Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

**Skin Protection:** Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

**Recommended Decontamination Facilities:** eye bath, washing facilities, safety shower

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical Form:** liquid  
**Color:** colorless  
**Odor:** slight  
**Odor Threshold:** 0.48 ppm  
**Specific Gravity:** 0.902 (20 °C)  
**Vapor Pressure:** 20 °C; 0.8 mbar  
**Vapor Density:** 4  
**Freezing Point:** -75 °C  
**Boiling Point:** 169 °C  
**Evaporation Rate:** 0.1 (n-butyl acetate = 1) **Viscosity:** 6.4 mPa.s (20 °C) ,  
**Solubility in Water:** complete  
**Octanol/Water Partition Coefficient:** P: 6.46; log P: 0.81  
**Flash Point:** 62 °C (Tag closed cup)  
**Autoignition Temperature:** 238 °C (ASTM D2155)  
**Thermal Decomposition Temperature:** 124.7 °C ; 21.7 J/g (DSC)

### 10. STABILITY AND REACTIVITY

**Stability:** Stable. Use caution when storing or processing material above

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**Incompatibility:** 12.3 °C. Forms peroxides of unknown stability.  
Material reacts with strong oxidizing agents.  
**Hazardous Polymerization:** Will not occur.

### 11. TOXICOLOGICAL INFORMATION

*Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.*

|                                       |   |
|---------------------------------------|---|
| Oral LD-50:(rat)                      | 1,746 mg/kg                                   |
| Oral LD-50:(mouse)                    | 1,519 mg/kg                                   |
| Oral LD-50:(guinea pig)               | 1,414 mg/kg                                   |
| Inhalation LC-50: (mouse)             | 7 h: 700 ppm                                  |
| Inhalation LC-50: (female guinea pig) | 1 h: > 633 ppm (highest concentration tested) |
| Inhalation LC-50: (male guinea pig)   | 1 h: > 691 ppm                                |
| Dermal LD-50: ( rabbit)               | 435 mg/kg                                     |
| Dermal LD-50: ( guinea pig)           | > 2,000 mg/kg (only dose tested)              |
| Skin Irritation (guinea pig)          | strong  |
| Skin Irritation (rabbit)              | moderate                                      |
| Eye Irritation (rabbit)               | moderate                                      |
| Skin Sensitization: (human)           | none  |

### 12. ECOLOGICAL INFORMATION

*Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.*

#### Oxygen Demand Data:

BOD-5: 1,300 mg/g  
BOD-20: 1,800 mg/g

COD (Chemical Oxygen Demand):: 2,180 mg/g  
ThBOD: 2,300 mg/g

#### Acute Aquatic Effects Data:

24 h LC-50 (goldfish): 1650 - 1700 mg/l  
96 h LC-50 (fathead minnow): 2137 mg/l  
96 h LC-50 (bluegill sunfish): 1490 mg/l  
168 h LC-50 (guppy): 983 ppm  
24 h EC-50 (daphnid): 1850 mg/l  
24 h LC-50 (daphnid): 1720 mg/l  
48 h LC-50 (daphnid): 835 mg/l

### 13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied.

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**14. TRANSPORT INFORMATION**

**Important Note:** *Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.*

**DOT (USA)**

Class combustible liquid, Packing group III for quantities of 450 liters (119 gallons) or more; not regulated for smaller quantities

*Possible Shipping Description(s):*

Combustible liquid, n.o.s. (ethylene glycol monobutyl ether)  
combustible liquid NA 1993 III

**Sea - IMDG (International Maritime Dangerous Goods)**

Class not regulated

*Possible Shipping Description(s):*

not regulated

**Air - ICAO (International Civil Aviation Organization)**

Class not regulated

*Possible Shipping Description(s):*

not regulated

**15. REGULATORY INFORMATION**

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.**

**WHMIS (Canada) Status:** controlled

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**WHMIS (Canada) Hazard Classification:** B/3, D/1/A, D/2/B

**SARA 311-312 Hazard Classification(s):**  
immediate (acute) health hazard  
delayed (chronic) health hazard  
fire hazard

**SARA 313: none, unless listed below**  
2-BUTOXYETHANOL (ETHYLENE GLYCOL MONOBUTYL ETHER) (GLYCOL ETHER CATEGORY)

**Carcinogenicity Classification (components present at 0.1% or more): none, unless listed below**

**TSCA (US Toxic Substances Control Act):** This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

**DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act):** This product is listed on the DSL. Any impurities present in this product are exempt from listing.

**EINECS (European Inventory of Existing Commercial Chemical Substances):** This product is listed on EINECS or otherwise complies with EINECS requirements. **EINECS Number:** 203-905-0

**AICS / NICNAS (Australian Inventory of Chemical Substances and National Industrial Chemicals Notification and Assessment Scheme):** This product is listed on AICS or otherwise complies with NICNAS.

**MITI (Japanese Handbook of Existing and New Chemical Substances):** This product is listed in the Handbook or has been approved in Japan by new substance notification.

**ECL (Korean Toxic Substances Control Act):** This product is listed on the Korean inventory or otherwise complies with the Korean Toxic Substances Control Act.

**Philippines Inventory (PICCS) :** This product is listed on the Philippine Inventory or otherwise complies with PICCS.

## 16. OTHER INFORMATION

Visit our website at [www.EASTMAN.com](http://www.EASTMAN.com) or call 001-423-229-2000.

*The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data only as a supplement to other information. Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment.*

*Highlighted areas indicate new or changed information.*