

# MATERIAL SAFETY DATA SHEET



Date Issued: 11/23/2005  
 MSDS No: SEB  
 Date-Revised: 08/31/2007  
 Revision No: 1

## SOLVENT EB

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** SOLVENT EB  
**PRODUCT CODE:** SEB, 436, 437, 438, 2894  
**ALTERNATE TRADE NAME(S):** RINSOLVE EB

#### MANUFACTURER

Distributed by Tarr, LLC  
 P.O. Box 12570  
 Portland OR 97212  
**Service Number:** 503-288-5294

Distributed by Tarr Acquisition, LLC  
 4115 W. Turney Ave.  
 Phoenix AZ 85019  
**Service Number:** 602-233-2000

#### 24 HR. EMERGENCY TELEPHONE NUMBERS

**CHEMTREC (US Transportation) :**(800) 424 - 9300  
**CANUTEC (Canadian Transportation) :**(613) 996 - 6666

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**IMMEDIATE CONCERNS:** COMBUSTIBLE - Harmful or fatal if swallowed - Can enter lungs and cause damage. May cause eye and skin irritation or injury.

#### POTENTIAL HEALTH EFFECTS

**EYES:** Severely irritating to the eyes causing pain, redness, swelling and blurred vision.

**SKIN:** May cause skin irritation. Symptoms may include redness, burning sensation and/or swelling.

**INGESTION:** May be harmful if swallowed. May cause gastric upset. Liquid can directly enter the lungs (aspiration) when swallowed or vomited. Serious lung damage and possibly fatal chemical pneumonia (chemical pneumonitis) can develop if this occurs.

**INHALATION:** Inhalation of vapors may cause respiratory irritation that may include a temporary burning sensation of the nose and throat, coughing, and /or difficulty breathing. If material enters lungs may cause coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and/or fever.

**MEDICAL CONDITIONS AGGRAVATED:** Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Eyes. Skin.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
2- Butoxyethanol	100	111-76-2

#### 4. FIRST AID MEASURES

**EYES:** Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.

**SKIN:** Remove contaminated clothing/shoes. Wipe off excess material from exposed area. Flush with large amounts of water for at least 15 minutes, by the clock, and follow by washing with soap, if available. If redness, swelling, pain and/or blisters occur, transport to the nearest medical facility for additional treatment. Do not reuse clothing until cleaned.

**INGESTION:** If swallowed, DO NOT INDUCE vomiting. If conscious, have victim rinse mouth out with water, then drink sips of water to remove taste from mouth. DO NOT GIVE LIQUIDS TO A DROWSY, CONVULSING OR UNCONSCIOUS PERSON. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Transport to nearest medical facility for additional treatment.

**INHALATION:** DO NOT attempt to rescue the victim unless proper respiratory protection is worn. Move victim to fresh air. If the victim has difficulty breathing or tightness of the chest, is dizzy, vomiting or unresponsive, 100% oxygen with rescue breathing or CPR should be administered by qualified personnel. Seek medical attention immediately.

**NOTES TO PHYSICIAN:** Consult a Poison Control Center for guidance. Ingestion may cause coma, metabolic acidosis, and hemoglobinuria. If more than 2.0 mL/kg has been ingested, vomiting should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

#### 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** 66°C (151°F) to 67°C (154°F)

**FLAMMABLE LIMITS:** 1.1% to 10.6%

**AUTOIGNITION TEMPERATURE:** ASTM E-659

**GENERAL HAZARD:** Carbon monoxide may be evolved if incomplete combustion occurs. The vapor is heavier than air, spreads along the ground and distant ignition is possible.

**EXTINGUISHING MEDIA:** Use alcohol-resistant foam, water spray or fog. For small fires only, may use dry chemical powder, carbon dioxide, sand or earth. Do NOT discharge extinguishing waters into the aquatic environment.

**HAZARDOUS COMBUSTION PRODUCTS:** Carbon monoxide and unidentified organic compounds may be formed during combustion.

**FIRE FIGHTING PROCEDURES:** Clear fire area of all non-emergency personnel. Do not enter fire space without proper protective gear, including eye protection and respiratory protection to prevent breathing products of combustion. Move containers from fire area if it can be done without risk. Use water stream to cool exposed containers.

## 6. ACCIDENTAL RELEASE MEASURES

**LARGE SPILL:** Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Wear appropriate personal protective equipment when responding to spills. Shut off source of leak if safe to do so. Dike and contain spill. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. Flush area with water to remove trace residue. Contain run-off from residue flush and dispose of properly. Prevent runoff from entering drains, sewers, streams, basements or confined areas.

**GENERAL PROCEDURES:** Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Section 8 of the Material Safety Data Sheet (MSDS). For guidance on disposal of spilled material see Section 13 of this MSDS. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapor or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas indicator.

## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Glycol ethers can be peroxide formers. Avoid breathing of or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to risk assessment of local circumstances to help determine appropriate controls for safe handling storage and disposal of this material.

**HANDLING:** Avoid inhaling vapor and/or mists. Avoid contact with skin, eyes and clothing. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge ( $\leq 10$  m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging or handling operations. Handling Temperature: Ambient.

**STORAGE:** Keep container tightly closed. Store in a diked, well-ventilated area, away from sunlight, ignition sources and other sources of heat. Must be kept inhibited during storage and shipment as material can polymerise. Vapors from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapor treatment system.

**STORAGE TEMPERATURE:** Ambient

**COMMENTS:** KEEP OUT OF REACH OF CHILDREN! Empty containers retain product residue (liquid and/or vapor) 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; they may explode and cause injury or death.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**EXPOSURE GUIDELINES**

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
Chemical Name		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
2- Butoxyethanol	TWA	50(S) <sup>(1)</sup>	240(S) <sup>(1)</sup>	20(S) <sup>(2)</sup>	121(S) <sup>(2)</sup>	NL	NL
	STEL	NL	NL	NL	NL	NL	NL
<b>OSHA TABLE COMMENTS:</b>							
1. NL = Not Listed							
2. S = Skin							

**ENGINEERING CONTROLS:** Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapor.

**PERSONAL PROTECTIVE EQUIPMENT**

**EYES AND FACE:** Chemical splash goggles (chemical monogoggles).

**SKIN:** Wear chemical resistant gloves such as: Butyl rubber for longer term protection or consult your safety equipment supplier. Incidental contact/Splash protection: Natural rubber. Neoprene rubber. Nitrile rubber. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced.

**RESPIRATORY:** If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapors (boiling point greater than 65 degrees C (149 degrees F)). Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

**PROTECTIVE CLOTHING:** Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

**WORK HYGIENIC PRACTICES:** Use good personal hygiene when handling this product. Wash hands after use, before eating, drinking, smoking, or using the toilet.

**OTHER USE PRECAUTIONS:** Monitoring of the concentration of substances in the breathing zone of workers or in other general workplace may be required to confirm compliance for adequacy of exposure controls. Examples of sources of recommended air monitoring methods are given below. Further national methods may be available. National Institute of Occupation Safety and Health (NIOSH), USA: Manual of Analytical Methods. Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods.

**COMMENTS:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE:** Liquid

**ODOR:** Rancid sweet.

**APPEARANCE:** Clear. Liquid.

**VAPOR PRESSURE:** 80 Pa at 20°C (68°F)

**VAPOR DENSITY:** 4.1 (Air=1)

**BOILING POINT:** 168°C (334°F) to 173°C (343°F)

**FLASHPOINT AND METHOD:** 66°C (151°F) to 67°C (154°F)

**SOLUBILITY IN WATER:** Fully miscible

**EVAPORATION RATE:** 0.08 (n-Butyl Acetate=1)

**Notes:** ASTM D 3539

**DENSITY:** 7.5

**SPECIFIC GRAVITY:** 0.890 to 0.90 at 20°C (68°F)

**(VOC):** 7.500 lbs./gal.

**COMMENTS:** Total HAPS: none.

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable under normal conditions of use. Glycol ethers can be peroxide formers. Potential exists for runaway reaction at elevated temperatures in the presence of strong bases and salts of strong bases. Reacts with strong oxidizing agents.

**CONDITIONS TO AVOID:** Exposure to air. Avoid heat, sparks, open flames and other ignition sources.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation. May form explosive peroxides.

**INCOMPATIBLE MATERIALS:** Strong oxidizing agents, acids, strong bases, salts of strong bases, aluminium.

**COMMENTS:** Hazardous Reactions: Hygroscopic.

**11. TOXICOLOGICAL INFORMATION**

**ACUTE**

**DERMAL LD<sub>50</sub>:** > 2000

**ORAL LD<sub>50</sub>:** > 500-2000 mg/kg (guinea pig)

**INHALATION LC<sub>50</sub>:**

**Notes:** 2-butoxyethanol: No deaths at highest tested dose. / 1 hours, guinea pig.

**EYE EFFECTS:** Risk of serious damage to eyes. Effects did not fully reverse over duration of study.

**SKIN EFFECTS:** Irritating to skin.

**CHRONIC:** Repeated Dose Toxicity for 2-Butoxyethanol: Blood: causes hemolysis of red blood cells and /or anaemia in animals, but not considered relevant for man.

**CARCINOGENICITY**

**IARC:** The International Agency for Research of Cancer (IARC) Carcinogenicity Classification for 2-Butoxyethanol is: IARC 3: Classification not possible from current data.

**NTP:** US NTP inhalation studies for 2-Butoxyethanol found no evidence of cancer in rats. In mice, a small increase in tumors of the liver and the forestomach occurred, which are of uncertain relevance to man.

**Notes:** Carcinogenicity Classification for 2-Butoxyethanol: ACGIH Group A3: Confirmed animal carcinogen with unknown relevance to humans.

**SENSITIZATION:** Not expected to be a skin sensitizer.

**REPRODUCTIVE EFFECTS:** 2-Butoxyethanol has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

**MUTAGENICITY:** Not mutagenic.

**GENERAL COMMENTS:** Guinea pig toxicity data is considered more relevant than rat data for human responses.

**COMMENTS:** Respiratory Irritation for 2-Butoxyethanol: Inhalation of vapors or mists may cause irritation to the respiratory system.

**12. ECOLOGICAL INFORMATION**

**ENVIRONMENTAL DATA:** Mobility: If product enters soil, it will be highly mobile and may contaminate groundwater.

**ECOTOXICOLOGICAL INFORMATION:** Acute Toxicity for 2-Butoxyethanol:

Fish: Low toxicity: LC/EC/IC50 greater than 1000 mg/l

Aquatic Invertebrates: Low toxicity: LC/EC/IC50 greater than 1000 mg/l

Algae: Low toxicity: LC/EC/IC50 greater than 100 mg/l

Microorganisms: Low toxicity: LC/EC/IC50 greater than 100 mg/l

**DISTRIBUTION:** Bioaccumulation: Not expected to bioaccumulate significantly.

**CHEMICAL FATE INFORMATION:** Persistence/degradability for 2-Butoxyethanol: Readily biodegradable meeting the 10 day window criterion. Oxidizes rapidly by photo-chemical reactions in air.

**GENERAL COMMENTS:** Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill response plan should be developed and implemented.

**13. DISPOSAL CONSIDERATIONS**

**DISPOSAL METHOD:** The preferred options for disposal are to send to licensed reclaimers, or to permitted incinerators. Any disposal practice must be in compliance with federal, state, and local regulations. Do not dump into sewers, ground, or any body of water.

**EMPTY CONTAINER: KEEP OUT OF REACH OF CHILDREN!** 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.

**RCRA/EPA WASTE INFORMATION:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**14. TRANSPORT INFORMATION****DOT (DEPARTMENT OF TRANSPORTATION)**

**PROPER SHIPPING NAME:** Combustible Liquid, N.O.S.

**TECHNICAL NAME:** (Ethylene glycol monobutyl ether)

**PRIMARY HAZARD CLASS/DIVISION:** Combustible liquid

**UN/NA NUMBER:** NA 1993

**PACKING GROUP:** III

**NAERG:** 128

**15. REGULATORY INFORMATION****UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

**311/312 HAZARD CATEGORIES:** This product should be reported as an immediate (acute) health hazard, and a fire hazard.

**FIRE:** Yes **PRESSURE GENERATING:** No **REACTIVITY:** No **ACUTE:** Yes  
**CHRONIC:** No

**313 REPORTABLE INGREDIENTS:** 2-butoxyethanol and glycol ethers are listed.

**302/304 EMERGENCY PLANNING**

**EMERGENCY PLAN:** To the best of our knowledge, this product is not listed as an extremely hazardous substance.

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

**TSCA STATUS:** Listed.

**16. OTHER INFORMATION**

**REASON FOR ISSUE:** Updated MSDS information and changed to new format.

**PREPARED BY:** P. Rodabaugh

**REVISION SUMMARY:** Revision #: 1 This MSDS replaces the December 07, 2005 MSDS. Any changes in information are as follows: In Section 9 Comments

**HMIS RATING**

<b>HEALTH:</b>	<input type="checkbox"/>	<b>2</b>
<b>ENVIRONMENTAL:</b>	<input type="checkbox"/>	<b>2</b>
<b>PHYSICAL HAZARD:</b>	<input type="checkbox"/>	<b>0</b>
<b>PERSONAL PROTECTION:</b>	<input type="checkbox"/>	<b>G</b>

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