

MATERIAL SAFETY DATA SHEET



Date Issued: 08/29/2008

MSDS No: E3FB1

E3 FUELS BLEND #1

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: E3 FUELS BLEND #1**PRODUCT CODE:** E3FB1**MANUFACTURER**

Tarr, LLC

P.O. Box 12570

Portland OR 97212

Service Number: 503-288-5294**24 HR. EMERGENCY TELEPHONE NUMBERS****CHEMTREC (US Transportation) :**(800) 424 - 9300**CANUTEC (Canadian Transportation) :**(613) 996 - 6666

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS: DANGER! Flammable liquid and vapor. Harmful or fatal if swallowed.

Vapors are heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Can cause severe lung damage and may be fatal if swallowed. Causes skin irritation. May be harmful if swallowed. May cause CNS depression.

POTENTIAL HEALTH EFFECTS

EYES: Vapors may be irritating to the eye.**SKIN:** Liquid is mildly irritating to the skin. May cause a burning sensation, redness and/or swelling.

Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

INGESTION: Ingestion may cause headache, dizziness, fatigue, and central nervous system depression.**INHALATION:** Vapors expected to be slightly irritating. Vapors may cause drowsiness and dizziness.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.**SKIN:** Skin irritations signs and symptoms may include a burning sensation, redness, swelling and/or blisters.**INGESTION:** If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever.**INHALATION:** Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing. Breathing of high vapor concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache,

nausea and loss of coordination. Continued inhalation may result in unconsciousness and death.

CARCINOGENICITY: Toluene is not known to be mutagenic or carcinogenic. However, the available human and experimental data are limited and insufficient to assess carcinogenic potential. Toluene is not listed as a carcinogen by NTP, IARC, or OSHA. Intentional abuse of toluene vapors has been linked to damage of brain, liver, kidney and to death. Many case studies involving abuse during pregnancy clearly indicate that toluene is a developmental toxicant. Developmental toxic effects comparable to those observed in humans have been seen in lab animals but the effects were generally associated with maternal toxicity.

MEDICAL CONDITIONS AGGRAVATED: Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product. Impaired function from preexisting disorders may be aggravated by exposure to this product. The following organs and/or organ systems may be aggravated and/or damaged by overexposure to the material. Heart, kidney, liver, auditory system. In severe cases death may result.

TARGET ORGAN STATEMENT: Cardiovascular system. Central nervous system (CNS).

SENSITIZATION: While there is no evidence that industrially acceptable levels of toluene vapors (e.g., the TLV) have produced cardiac effects in humans, animal studies have shown that inhalation of high levels of toluene produced cardiac sensitization. Such sensitization may cause fatal changes in heart rhythms. This latter effect was shown to be enhanced by hypoxia or the injection of adrenalinlike agents. Prolonged and repeated exposures to high concentrations of toluene have resulted in hearing loss in laboratory rats. While the effect of solvents on the human auditory system is uncertain, solvent abusers exposed to high doses of toluene show signs of hearing loss, and occupational exposure to toluene may interact with noise in causing hearing loss in the work environment. The effects of solvents on human hearing are uncertain. Solvent abusers and noise interaction with toluene in the work environment may cause signs of hearing loss.

COMMENTS HEALTH: Possibility of organ or organ system damage from prolonged exposure. Refer to toxicology section 11 for detailed information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Solvent naphtha, light aliphatic	7 - 9	064742-89-8
Acetone	8.5 - 11	000067-64-1
Xylenes (o-,m-,p- isomers)	8 - 10	001330-20-7
2-Propanol	71 - 73	000067-63-0

COMMENTS: Contains n-Heptane, (CAS 142-82-5) Xylene contains the following constituents: ethyl benzene (CAS 100-41-4), toluene (CAS 108-88-3), benzene (CAS 71-43-2).

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling persist, contact a physician.

SKIN: Remove contaminated clothing/shoes. Flush skin with water for at least 15 minutes. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned.

INGESTION: DO NOT INDUCE VOMITING. Do not attempt to give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Seek immediate medical attention.

NOTES TO PHYSICIAN: Causes central nervous system depression. Dermatitis may result from prolonged or repeated exposure. Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: (1°F) to (81°F) Tagliabue Closed Cup

FLAMMABLE LIMITS: 0.01 to 7.0 % (V)

AUTOIGNITION TEMPERATURE: (750°F) to (980°F)

EXTINGUISHING MEDIA: Use water fog, "alcohol" foam, dry chemical, or CO₂.

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

FIRE FIGHTING PROCEDURES: WARNING! Flammable Liquid. Clear fire area of unprotected personnel. Product will float and can be reignited on surface water. Vapors are heavier than air. Vapors may travel across the ground and distant ignition is possible. Keep adjacent containers cool by spraying with water. Do not use water in a jet.

FIRE FIGHTING EQUIPMENT: Do not enter fire area without proper protection. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: For small liquid spills (less than 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

LARGE SPILL: For large liquid spills (greater than 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Keep material out of storm sewers and ditches which lead to waterways.

AIR SPILL: Notify authorities if any exposure to the general public or the environment occurs or is

likely to occur. Vapor may form an explosive mixture with air. U.S. regulations may require reporting releases of this material to the environment which exceed the reportable quantity to the National Response Center at (800) 424-8802.

GENERAL PROCEDURES: WARNING. Flammable. 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. Dike around large spills to prevent spreading. Absorb small spills with inert material (clay, sand). Prevent contamination of surface waters.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: 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: Do not taste or swallow. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep away from heat, sparks, and flame. Surfaces that are hot may ignite even liquid product 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 PRESSURE: 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. Flammables-area.

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		SupplierOEL	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³
Solvent naphtha, light aliphatic	TWA	[1]	[1]			100 [2]	400 [2]
Acetone	TWA	1000	2400	500			
	STEL			750			
Xylenes (o-,m-,p- isomers)	TWA	100	435	100	434		
	STEL			150	651		
2-Propanol	TWA	400 ppm	980 mg/m ³	200 ppm	490 mg/m ³	NL [3]	NL [3]
	STEL	ppm	mg/m ³	400 ppm	960 mg/m ³	NL	NL

OSHA TABLE COMMENTS:

1. Our supplier has adopted, as Interim Standards, the OSHA PELs that were established in 1989 and later rescinded.
2. In the absence of occupational exposure standards for this product, it is recommended that these values are adopted.
3. NL = Not Listed

ENGINEERING CONTROLS: Provide exhaust ventilation sufficient to keep the airborne concentration of this product below its exposure limits. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

PERSONAL PROTECTIVE EQUIPMENT

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

SKIN: Longer term protection: Nitrile rubber gloves. Incidental contact/Splash protection: PVC or neoprene rubber gloves.

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: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOR: Fragrant odor.

APPEARANCE: Light colored liquid.

PERCENT VOLATILE: 100

VAPOR PRESSURE: Not Determined

VAPOR DENSITY: (Air=1)

Notes: Heavier than air.

BOILING POINT: (133°F) to (302°F)

FREEZING POINT: NDA = no data available.

MELTING POINT: No data available.

FLASHPOINT AND METHOD: (1°F) to (81°F) Tagliabue Closed Cup

SOLUBILITY IN WATER: Solubility negligible in water.

EVAPORATION RATE: Less than 1 (n-Butyl Acetate = 1)

DENSITY: 6.612

SPECIFIC GRAVITY: 0.794 at 15.6°C (60.°F)

(VOC): 6.612 lbs./gal.

10. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: 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.

INCOMPATIBLE MATERIALS: Strong oxidizers.

11. TOXICOLOGICAL INFORMATION

ACUTE

Chemical Name	ORAL LD₅₀ (rat)	DERMAL LD₅₀ (rabbit)	INHALATION LC₅₀ (rat)
Solvent naphtha, light aliphatic	> 2000 mg/kg (Rat)	> 2000 mg/kg (rat)	> 5000 ppm / 1 hour (rat)
Xylenes (o-,m-,p- isomers)	4300 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	6700 ppm / 4 hours (rat)

ORAL LD₅₀: Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.

INHALATION LC₅₀: High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

EYE EFFECTS: Expected to be non-irritating to eyes.

SKIN EFFECTS: Irritating to skin.

CHRONIC: Cardiovascular system: Chronic abuse of similar materials has been associated with irregular heart rhythms and cardiac arrest. Central nervous system: Repeated exposure affects the nervous system. Kidney: caused kidney effects in male rats which are not considered relevant to humans.

CARCINOGENICITY

IARC: While there is no evidence that industrially acceptable levels of toluene vapors (e.g., the TLV) have produced cardiac effects in humans, animal studies have shown that inhalation of high levels of toluene produced cardiac sensitization. Such sensitization may cause fatal changes in heart rhythms. This latter effect was shown to be enhanced by hypoxia or the injection of adrenalinlike agents. Prolonged and repeated exposures to high concentrations of toluene have resulted in hearing loss in laboratory rats. While the effect of solvents on the human auditory system is uncertain, solvent abusers exposed to high doses of toluene show signs of hearing loss, and occupational exposure to toluene may interact with noise in causing hearing loss in the work environment. The effects of solvents on human hearing are uncertain. Solvent abusers and noise interaction with toluene in the work environment may cause signs of hearing loss.

Notes: Xylene, Mixed Isomers: ACGIH Group A4: Not classifiable as a human carcinogen.

SENSITIZATION: Repeat Dose Testing: While there is no evidence that industrially acceptable levels of light hydrocarbon vapors (e.g., the occupational exposure limit) have produced cardiac effects in humans, animals studies have shown that inhalation of high levels produced cardiac sensitization. Such sensitization may cause fatal changes in heart rhythms, which was shown to be enhanced by hypoxia or the injection of adrenaline-like substances.

TERATOGENIC EFFECTS: Prolonged and repeated exposures to high concentrations of some volatile hydrocarbon solvents have resulted in hearing loss in rats. Solvent abusers and noise interaction with these solvents in the work environmental may cause symptoms of hearing loss.

GENERAL COMMENTS: Reproductive and Developmental Toxicity: In developmental toxicity studies conducted in laboratory animals, there is no evidence of teratogenicity following inhalation exposure to xylene, but delayed development and behavioral impairments have been observed at does levels causing no or only slight maternal toxicity. Neurotoxicity: Prolonged and repeated exposures to high

concentrations of some volatile hydrocarbon solvents have resulted in hearing loss in rats. Solvent abusers and noise interaction with these solvents in the work environment may cause symptoms of hearing loss. Short term repeated inhalation exposure of humans to m-xylene (200 ppm or greater) was reported to produce slight impairment of vestibular and visual function and reaction time. In these studies, there was no evidence of cumulative effects but some evidence of tolerance or adaptation. Other Information: Over exposures of humans to xylene or xylene solvent mixtures produced predominated central nervous system (CNS) effects with less common effects reported to the lung, gastrointestinal tract, liver, kidney and heart. High exposures to xylene in some animal studies, often at levels toxic to the mother, affected embryo/fetal development. The significance of this finding to humans is not known. Ethylbenzene Acute Data: LD50 Oral Rat = 3500 mg/kg, LC50 Inhalation Rat = 4000 ppm for 4 hours, LD50 Dermal Rabbit = 17.8 mL/kg.

COMMENTS: Our supplier reports that information given is based on product testing, and/or similar products and/or components.

12. ECOLOGICAL INFORMATION

DISTRIBUTION: Mobility: Floats on water.

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.

PRODUCT DISPOSAL: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.

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.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Flammable Liquids, N.O.S., (Isopropanol, Xylene)

PRIMARY HAZARD CLASS/DIVISION: 3

UN/NA NUMBER: UN 1993

PACKING GROUP: II

NAERG: 128

OTHER SHIPPING INFORMATION: This material is an "OIL" under 49 CFR part 130 when transported in a container of 3500 gallon capacity or greater.

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: Xylenes (1330-20-7), ethyl benzene (100-41-4), toluene (108-88-3), benzene (71-43-2)

302/304 EMERGENCY PLANNING

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

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

CERCLA RQ: Solvent naphtha, light aliphatic (CAS 64742-89-8) Reportable quantity: 66,667 lbs., Xylene, Mixed Isomers (CAS 1330-20-7) Reportable quantity: 100 lbs.
meta-Xylene (CAS 108-38-3) Reportable quantity: 1,000 lbs.
Ethylbenzene (CAS 100-41-4) Reportable quantity: 1,000 lbs.
Benzene (CAS 71-43-2) Reportable quantity: 10 lbs.
Toluene (CAS 108-88-3) Reportable quantity: 1,000 lbs.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: Listed.

CALIFORNIA PROPOSITION 65: The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the State of California to cause cancer.: Ethylbenzene (100-41-4) 0.03%, Benzene (71-43-2) 0.015%.

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the State of California to cause birth defects or other reproductive harm.: Benzene (71-43-2) 0.015%, Toluene (108-88-3) 0.0118%.

CLEAN WATER ACT: Xylene, Mixed Isomers (CAS 1330-20-7) Reportable quantity: 100 lbs.
meta-Xylene (CAS 108-38-3) Reportable quantity: 100 lbs.
Ethylbenzene (CAS 100-41-4) Reportable quantity: 1,000 lbs.
Benzene (CAS 71-43-2) Reportable quantity: 10 lbs.
Toluene (CAS 108-88-3) Reportable quantity: 1,000 lbs.

Under Section 311 of the Clean Water Act (CWA) this material is considered an oil. As such, spills into surface waters must be reported to the National Response Center at (800) 424-8802. The components with RQs are given for information.

CANADA

WHMIS CLASS: This product has a WHMIS classification of B2, Flammable Liquid and D2B, Other Toxic Effects - Skin Irritant.

DOMESTIC SUBSTANCE LIST (INVENTORY): Listed.

GENERAL COMMENTS: The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

16. OTHER INFORMATION

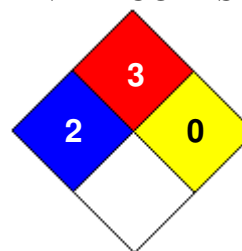
PREPARED BY: Compliance Dept.

REVISION SUMMARY: New MSDS

HMIS RATING

HEALTH:	2
FLAMMABILITY:	3
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	H

NFPA CODES



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