

MATERIAL SAFETY DATA SHEET

E85 FUEL

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: Tarr, LLC
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PRODUCT NAME: E85 FUEL

PRODUCT NUMBER: E85F

UPC NUMBER:

PREPARED BY: Patricia Rodabaugh

DATE PREPARED: 12/15/2004

LAST REVISION: 2/26/1999

SYNONYMS:

Tarr

Portland, Oregon
Phoenix, Arizona
Auburn, Washington
Vancouver, Washington

Print Date: 12/15/2004

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %	OSHA PEL	ACGIH TLV	NOTE
Ethyl alcohol	64-17-5	83-87	1000 ppm	1000 ppm	
Gasoline		13-17	300		May contain the following constituents:
Benzene	71-43-2	<1.5	1 ppm	5 ppm	
Ethyl benzene	100-41-4	<1	100 ppm	50 ppm (skin)	
Xylenes	1330-20-7	<1	100 ppm	100 ppm	
Toluene	108-88-3	<1	100 ppm	50 ppm (skin)	
Hexane, n-	110-54-3	<1	50 ppm	50 ppm	
n-butane	106-97-8	<1		800	
n-pentane	109-66-0	<1	1000	120	
Heptane, n-	142-82-5	<1	500 ppm	400 ppm	
Methylcyclohexane	108-87-2	<1	400 ppm	400 ppm	

3. HAZARDOUS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! Extremely flammable liquid and vapor.

POTENTIAL HEALTH EFFECTS

EYE CONTACT: Liquid is moderately irritating to the eyes. High vapor concentrations may also be irritating. Exposure to liquids, vapors or mists may cause stinging, tearing, redness, swelling and eye damage.

INHALATION: May cause mild irritation to the nose, throat and respiratory tract and may result in central nervous system (CNS) depression.

INGESTION: Ingestion of excessive quantities may cause irritation of the digestive tract, and signs of nervous system depression (headache, drowsiness, dizziness, loss of coordination, and fatigue.)

SKIN CONTACT: Liquid is a skin irritant. Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

SIGNS AND SYMPTOMS OF EXPOSURE:

Shortness of breathing, confused behavior, redness of skin, swelling of tissues, watery eyes, and nausea.

4. FIRST AID MEASURES

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

INGESTION: DO NOT INDUCE VOMITING. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

SKIN CONTACT: Wash affected area with soap and water. If irritation occurs, get medical attention.

AGGRAVATED MEDICAL CONDITIONS:

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.

SUPPLEMENTAL HEALTH INFORMATION:

Laboratory studies have shown that petroleum distillates may cause kidney, liver, or lung damage. reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

FLASH POINT: -57 F

FLASH POINT METHOD USED: Tag Closed Cup

AUTOIGNITION: 685 F

LEL: 0.008 **UEL:** 0.19

EXTINGUISHING MEDIA:

Use "alcohol resistant" foam, dry chemical, or CO2. Wter may be ineffective, but water applied as a spray can absorb some of the fire's heat and should be used to keep fire-exposed containers cool.

SPECIAL FIRE FIGHTING PROCEDURES:

WARNING. Flammable Liquid. Clear fire area of unprotected personnel. Do not enter confined fire space without full bunker gear, including a positive pressure NIOSH approved SCBA. Cool fire exposed containers with water.

UNUSUAL FIRE AND EXPLOSION 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.

COMBUSTION PRODUCTS:

Carbon monoxide and unidentified organic compounds may be formed during combustion.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:

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.

7. HANLDING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

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.

OTHER PRECAUTIONS:

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.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

RESPIRATORY PROTECTION:

If exposure may or does exceed occupational exposure limits (Sec. 2) use a NIOSH approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either an atmosphere-supplying respir. or an air-purifying respir. for organic vapors.

VENTILATION:

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.

PROTECTIVE GLOVES:

Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

EYE PROTECTION:

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.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

Wear gloves and protective clothing which are impervious to this product for the duration of anticipated exposure, if there is potential for skin contact.

WORK / HYGENIC PRACTICES:

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

ENGINEERING CONTROLS:

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

EXPOSURE GUIDELINES:

May be harmful or fatal if swallowed. May irritate body tissues. Use with adequate ventilation. Avoid breathing vapor. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

SOLUBILITY IN WATER: Complete in water for Pure Ethyl Alcohol.

APPEARANCE AND ODOR: Clear, water-white liquid with alcohol odor.

BOILING POINT:	31 F	PERCENT VOLATILE:	100
VAPOR PRESSURE:	2.05 - 420	PH:	N/A
EVAPORATION RATE:	Slower than ether	MOLECULAR WEIGHT:	N/A
POUNDS PER GALLON:	6.23	VAPOR DENSITY:	Heavier than air
SPECIFIC GRAVITY:	0.75	OTHER PROPERTIES:	
MELTING POINT:	-173 F		
FREEZING POINT:	NDA		

10. STABILITY AND REACTIVITY

STABILITY: Stable

CONDITIONS TO AVOID: Avoid strong alkalies and oxidizing agents.

INCOMPATIBILITY:

Strong acids or bases, oxidizers, alkali metals, and halogens..

HAZARDOUS DECOMPOSITION OR BY PRODUCTS:

Carbon monoxide and unidentified organic compounds may be formed during combustion.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID: Avoid heat, flame, and other sources of ignition.

11. TOXICOLOGY INFORMATION

This product may contain benzene (CAS No. 71-43-2) at a concentration less than 10 ppm.

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

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.

14. TRANSPORTATION INFORMATION

DOT Proper Shipping Name:	Flammable liquids, n.o.s. (gasoline, ethanol)	PACKING GROUP:	II
HAZARD CLASS:	3	GUIDE NUMBER:	128
UN NUMBER:	UN 1993	DOT CLASS:	Flammable liquid

15. REGULATORY INFORMATION

This product is a mixture and each component is listed in the TSCA Inventory of Chemical Substances.

16. OTHER INFORMATION

HMIS INFORMATION: **HEALTH:** 2 **FLAMMABILITY:** 4 **REACTIVITY:** 0 **PROTECTIVE:** H

SARA Title III Information:

SARA 302: To the best of our knowledge, none of the chemicals in this product are listed as an Extremely Hazardous Substance under Section 302 of SARA Title III nor does this product contain any other such substances.

SARA 311/312: This product should be reported as an immediate (acute) health hazard, delayed (chronic) health hazard, and a fire hazard.

SARA 313: Xylenes (1330-20-7), toluene (18-88-3), n-hexane (110-54-3) and ethyl benzene (100-41-4)

Supplemental Health Info.: This product contains the following chemicals known to the State of California to cause cancer & reproductive toxicity: Benzene, Toluene

A chronic feeding study in rats with ethyl benzene caused cancer (increase in total malignant tumors). Developmental toxicity studies in rats with ethyl benzene showed evidence of skeletal and other malformations at maternally toxic doses; similar effects were not seen in rabbits. Ethyl benzene was not mutagenic in: Ames test, yeast, drosophila, sister chromatic exchange with cultured human lymphocytes cells and in vitro cytogenetics assay with CHO cells.

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.

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.

N/A = Not Applicable

NDA = No Data Available

Disclaimer

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