

Appendix D: Material Safety Data Sheet for E85

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

U.S. Department of Labor

Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY (As Used on Label and List)

Fuel Ethanol Ed85

Note: Blank spaces not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name Archer Daniels Midland Company	Emergency Telephone Number 800/424-9300 or 217/424-5200
Address (Number, Street, City, State, and ZIP Code) 4666 Fairies Parkway Decatur, Illinois 62526	Telephone Number for Information 217/362-3980
	Date Prepared 7/5/95
	Signature of Preparer (optional)

Section II – Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Ethyl Alcohol (200 proof) CAS 0064-17-5				80%
Natural Gasoline CAS 008-006-619				20%
*Benzene CAS-0071-43-2	1ppm	10ppm		< 1100ppm
A chemical known to the State of California to cause cancer				

Section III – Physical/Chemical Characteristics

Boiling Point	96°-170°F	Specific Gravity (H ₂ O = 1)	0.76-0.78
Vapor Pressure (mm Hg.)	340-560	Melting Point	NA
Vapor Density (AIR - 1)	2.0-4.0	Evaporation Rate (Butyl Acetate = 1)	Not Estimated
Solubility in Water 60-70 gm./100ml.			
Appearance and Odor Clear, colorless volatile liquid with ethereal odor.			

Section IV – Fire and Explosion Hazard Data

Flash Point (Method Used) -20°F to -4°F TCC	Flammable Limits Not Estimated	LEL 1.4	UEL 19.0
Extinguishing Media Carbon dioxide dry chemical, water for small fires. Polar solvent foam for large fires.			
Special Fire Fighting Procedures Use necessary protective equipment and breathing apparatus as would normally be used when fighting fires where there may be danger of breathing hazardous products of combustion.			
Unusual Fire and Explosion Hazards Flammable liquid			

(Reproduce locally)

OSHA 174, Sept, 1985

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Section V – Reactivity Data

Stability	Unstable		Conditions to Avoid None in normal use.
	Stable	X	
Incompatibility (<i>Materials to Avoid</i>) May react vigorously with oxidizing materials.			
Hazardous Decomposition or Byproducts Combustion may produce CO ₂ , NO _x and reactive hydrocarbons.			
Hazardous Polymerization	May Occur		Conditions to Avoid None in normal use.
	Will Not Occur	X	

Section VI – Health Hazard Data

Route(s) of Entry:	Inhalation? (A)	Skin? (B)	Ingestion? (C)
Health Hazards (<i>Acute and Chronic</i>) (A) May cause mucous membrane irritation; unconsciousness; coma; respiratory failure and death. (B) May cause skin irritation as a result of defatting. (C) Moderately toxic (LD50 0.5 to 5 G/Kg), gastrointestinal irritation, vomiting, CNX depression, coma.			
Carcinogenicity:	NTP? Not determined	IARC Monographs Not determined	OSHA Regulated? Yes
Signs and Symptoms of Exposure May cause dizziness, loss of balance and coordination.			
Medical Conditions Generally Aggravated by Exposure Not determined			
Emergency and First Aid Procedures If swallowed, do not induce vomiting. If inhaled, remove person to fresh air. Give artificial respiration if breathing has stopped. Call a physician. If splashed in eyes or on skin, flush immediately with copious amounts of water.			

Section VII – Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled Eliminate all sources of ignition. Small spills should be flushed with large quantities of water. Large spills should be collected for waste disposal.	
Waste Disposal Method Do not allow to enter sewers where vapors may be ignited. Incinerate in furnace where permitted under appropriate federal, state & local regulations or dispose of in a site stipulated for hazardous materials.	
Precautions to Be Taken in Handling and Storage Keep away from heat, sparks, & open flames. Keep container closed. Use with adequate ventilation.	
Other Precautions Use explosion proof electrical equipment and non-sparking tools. Ground electrical equipment.	

Section VIII – Control Measures

Respiratory Protection (Specify Type) Air supplied mask for high concentrations			
Ventilation	Local Exhaust Preferred	Special	None
	Mechanical (general) Acceptable	Other	None
Protective Gloves Rubber	Eye Protection Goggles		
Outer Protective Clothing or Equipment Eye bath and safety shower			
Work/Hygienic Practices NA			