AVENTINE RENEWABLE ENERGY, INC.

1300 S. SECOND ST.
PEKIN, IL 61554

MATERIAL SAFETY DATA SHEET

NOTE: Read and understand Material Safety Data Sheet before handling or disposing of product.

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.

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

SECTION I - Product and Company Identification

MATERIAL IDENTITY

Product Name: Fuel Ethanol E-85
Product Code: 92224

Date Prepared: 06/01/2006

Manufacturer's Name and Address:

Aventine Renewable Energy, Inc.
1300 South Second St.
Pekin, IL 61554

Telephone Numbers:

-Chemtrec : (800) 424-9300
-Company : (309) 347-9200

SECTION II - Hazardous Ingredients / Identity Information

HAZARDOUS COMPONENTS (Specific Chemical identity: Common Name(s))	OSHA PEL (ppm)	ACGIH TLV *	CAS NO.	% (optional)
Ethyl alcohol (200 % proof)	1000	1000	64-17-5	85
Natural Gasoline	N/A	300	8006-61-92	15
Benzene (29 CFR 1910.1028)	1	0.3	71-43-2	<0.15
* = parts per million (ppm)				

SECTION III - Physical/Chemical Characteristics

Boiling Point	36 - 77° C	Specific Gravity (H_2O = 1)	.78 @ 20° C
Vapor Pressure (mm Hg.)	340-560 @ 35° C	Melting Point	N/A
Vapor Density (AIR = 1)	2 - 4	Evaporation Rate (Butyl Acetate = 1)	N/A

Solubility in Water : 60 – 70 gm/100 ml

Appearance and Odor: Clear, colorless volatile liquid with an ethereal odor.

SECTION IV - Fire and Explosion Hazard Data

Flash Point (Method Used) 20 -4° F Tag Closed Cup	Auto ignition Temp: 450 - 500° F	Flammable Limits LEL: 1.9%	In Air: UEL : 19%

Extinguishing Media: Carbon dioxide, dry chemical, or water for small fires. Polar solvent for larger fires.

Special Fire Fighting Procedures: Use alcohol-compatible foam, water may be ineffective on flames but may be used to cool fire-exposed container. Wear self-contained breathing apparatus (SCBA) when fighting fire in a confined space.

Unusual Fire and Explosion Hazards: Flame is invisible in daylight. Extremely flammable materials may release vapors that are heavier than air and travel long distance, ignite and flash back.

N.A. = NOT APPLICABLE
N/A = NOT AVAILABLE

SECTION V - Reactivity Data

Stability	Unstable		Conditions to Avoid: High heat, sparks, and hot metal surfaces.
	Stable	X	

Incompatibility (Materials to Avoid): May react vigorously with heat, oxidizing materials, such as nitrates, peroxides and acids.

Hazardous Decomposition or Byproducts: Combustion may produce carbon monoxide, carbon dioxide, aldehydes NOx, and reactive hydrocarbons.

Hazardous Polymerization	May Occur		Conditions to Avoid: N.A.
	Will Not Occur	X	

SECTION VI - Health Hazard Data

Route(s) of Entry :	Inhalation: Yes	Skin: No	Ingestion: Yes

Health Hazards: Acute Effects of Overexposure: The solvent in this product, when inhaled or absorbed in harmful quantities, may produce central nervous system depression characterized by headaches, nausea, dizziness, loss of balance and coordination, and stupor. Vapors or spray mists may be irritating to nasal and respiratory tract. Product may be irritating to skin and eyes resulting in redness, itching or burning. Introduction of solvents, as in aspiration of vomitus fluid, may produce chemical pneumonia.
Chronic Effects of Overexposure: Contact, especially if prolonged or repeated may cause redness, itching, or blistering of the skin.

Carcinogenicity : Benzene Only	NTP: Yes	IARC Monographs: Yes	OSHA Regulated: Yes

Signs and Symptoms of Exposure: Central nervous system reactions including nausea, dizziness, headaches and stupor of speech associated with difficulty in walking.

Medical Conditions Generally Aggravated by Exposure: Existing respiratory disorders and skin diseases may be aggravated by exposure.

Emergency and First Aid Procedures:
SKIN: Wash skin thoroughly with soap or mild detergent. Apply a skin cream with lanolin. If irritation occurs get medical attention.
EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention at once.
INHALATION: Move exposed person to fresh area. If not breathing give artificial respiration. Get medical attention immediately.
INGESTION: If swallowed do not induce vomiting. If vomiting occurs, keep head below waist level. Get medical attention immediately.

SECTION VII - Precautions for Safe Handling and Use

Steps to Be Taken in case Material is Released or Spilled : Eliminate all sources of ignition, contain small spill with inert absorbent material and clean up with non-sparking tools. For larger spills flush with water to reduce the potential for fire hazard. Remove liquid to suitable containers by pump.

Waste Disposal Method : Disposal must be in accordance with applicable Federal, State, or Local regulations.

Precautions to Be Taken in Handling and Storing : Do not store at temperature above 120° F or in direct sunlight. Do not puncture or incinerate containers. Ground and cross bond all containers when pouring or transferring. Avoid prolonged or repeated contact. Store away from Heat, Sparks and Flame.

Other Precautions : Do not weld on empty containers unless the containers have been triple rinsed.

SECTION VIII - Control Measures

Respiratory Protection (Specify Type) : Air-purifying respirators with cartridges for organic vapors.

Ventilation Local Exhaust: For airborne concentrations above 1000 ppm.

Mechanical (General) : Yes Other: N.A.

Protective Gloves : Impervious gloves (Neoprene)	Eye Protection : Safety Goggles

Other Protective Clothing or Equipment : Eye baths and safety showers are recommended.

Work/Hygienic Practices : Check atmosphere for explosiveness and oxygen deficiency.

(Reproduced locally)
N.A. = NOT APPLICABLE N/A = NOT AVAILABLE

PRODUCT NAME: **E-85 ETHANOL/GASOLINE BLEND**
(D.A.G. 2-F Denatured Alcohol with Extra Gasoline)

MSDS NO: E85

EFFECTIVE DATE: July 11, 2005

MANUFACTURED BY: Commercial Alcohols Inc. (Les Alcools De Commerce Inc.)
Bruce Energy Centre
4th Concession
Tiverton, Ontario
N0G 2T0

275 Bloomfield Road
Chatham,
Ontario
N7M 5J5

EMERGENCY PHONE NUMBER: CANUTEC (613) 996-6666
NON-EMERGENCY INFORMATION PHONE NUMBER: (905) 790-7500

TRANSPORTATION

PRIMARY CLASS:	3	**CLASS NAME:**	FLAMMABLE LIQUID	**UN#:**	1987
SUBSIDIARY CLASS:	NONE				
SHIPPING NAME:	ALCOHOLS, N.O.S.(ETHANOL)				

I. EMERGENCY AND FIRST AID PROCEDURE

INGESTION	• Never give anything by mouth if victim is rapidly losing consciousness or is unconscious or convulsing. • DO NOT INDUCE VOMITING. • Have victim drink about 250ml (8fl. oz.) of water to dilute material in stomach. • If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. • Seek medical assistance immediately.
SKIN	• Flush contaminated area with water for at least 20 minutes. • Remove contaminated clothing under running water. • Completely decontaminate clothing before re-use, or discard. • If irritation occurs seek medical attention.
INHALATION	• Remove victim to fresh air. • Artificial respiration should be given if breathing has stopped and cardiopulmonary resuscitation if heart has stopped. • Oxygen may be given if necessary. • Seek medical attention immediately.
EYES	• Immediately flush eyes with water for at least 20 minutes, holding the eyelids open. • Seek medical attention immediately.
NOTES TO PHYSICIAN	• Symptoms of ethanol intoxication vary with the alcohol level of the blood. Mild alcohol intoxication occurs at blood levels between 0.05-0.15% and approximately 25% of individuals will show signs of intoxication at these levels. Above 0.15% the person is definitely under the influence of ethanol and 50-95% of individuals at this level are clinically intoxicated. Severe poisoning occurs when the blood ethanol level is 0.3-0.5%. Above 0.5% the individual will be comatose and death can occur. • The unabsorbed ethanol should be removed by gastric lavage after intubating the patient to prevent aspiration. • Avoid the use of depressant drugs or the excessive administration of fluids. • This product contains 15% v/v of gasoline, a product which has shown carcinogenic properties in animal studies, and has been classified as an animal carcinogen by the International Agency for Research in Cancer.

THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BASED UPON DATA BELIEVED TO BE CORRECT. HOWEVER, NO GUARANTEE OR WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, IS MADE WITH RESPECT TO INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN.

II. FIRE AND EXPLOSION HAZARD DATA

using conversion factor @
http://www.sensotone.co.uk/pressure-units-conversion

FLASH POINT, °C

- 0 to -18 (Tag closed cup, ASTM D-56)

OTHER IMPORTANT DATA

COMPONENT	% V/V	FLAMMABLE LIMITS, % V/V		VAPOUR PRESSURE	VAPOUR DENSITY	AUTOIGNITION POINT, °C
		LOWER	UPPER	KPA AT 20°C	(AIR = 1)	
(1) Gasoline	15	1.4	7.6	Variable	3.4	N/A
(2) Ethyl Alcohol	remainder	3.3	19.0	5.87 ≈ 0.85 psi	1.6	422

EXTINGUISHING MEDIA

- Apply all-purpose-type foams by manufacturers' recommended techniques for large fires.
- Use carbon dioxide or dry chemical media for small fires.

SPECIAL FIREFIGHTING PROCEDURES

- Use water spray to cool fire-exposed containers and structures.
- Use water spray to disperse vapours; reignition is possible.
- Use self-contained breathing apparatus and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS

- Vapours form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from handling point.

III. IDENTIFICATION

CHEMICAL NAME	ETHANOL/GASOLINE BLEND	**CHEMICAL FAMILY**	ALCOHOLS/HYDROCARBONS
FORMULA	(1) Mixture (2) $CH_3 - CH_2 - OH$	**MOLECULAR WEIGHT**	(1) Not Applicable (2) 46.07
SYNONYMS	• None.		
USE	• Oxygenated fuel (fuel alcohol).		

MATERIAL SAFETY DATA SHEET

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHS Inc.
P.O. Box 64089
Mail station 525
St. Paul, MN 55164-0089

Transportation Emergency (CHEMTREC): 1-800-424-9300
Technical Information: 1-651-355-8443
MSDS Information: 1-651-355-8438

PRODUCT NAME: E-85 (Fuel Ethanol)
COMMON NAME: E-85

MSDS: 0183-E85AL – Rev. B (12-23-03)
CHEMICAL FORMULA: Mixture

CHEMICAL NAME: Light Petroleum Distillate

CHEMICAL FAMILY: Mixed Petroleum Hydrocarbon

Section 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

INGREDIENTS	PERCENTAGES (by weight)	PEL (OSHA)	TLV (ACGIH)	CAS #
Major components				
Gasoline	15	300 ppm TWA 500 ppm STEL	300 ppm TWA 500 ppm STEL	8006-61-9
Ethyl Alcohol (Ethanol)	85	1000 ppm TWA	1000 ppm TWA	64-17-5
Ingredients				
Toluene	< 5	100 ppm TWA 150 ppm STEL	50 ppm TWA	108-88-3
Xylene Isomers	< 5	100 ppm TWA 150 ppm STEL	100 ppm TWA 150 ppm STEL	1330-20-7
Benzene	< 2	1 ppm TWA 5 ppm STEL	0.5 ppm TWA 2.5 ppm STEL	71-43-2
1,2,4-Trimethylbenzene	< 2	25 ppm TWA	25 ppm TWA	95-63-6
Ethyl Benzene	< 1	100 ppm TWA 125 ppm STEL	100 ppm TWA 125 ppm STEL	100-41-4

(TWA) - Time Weighted Average is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.
(STEL) - Short Term Exposure Limit is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during a work day unless another time limit is specified.

Section 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Light golden brown liquid with gasoline odor - HIGHLY FLAMMABLE LIQUID.
DANGER! Contains Benzene. Cancer Hazard. Can cause kidney, liver and blood disorders.

OSHA HAZARD CLASS

Based on OSHA definitions, the following ingredients in this product are hazardous. The OSHA physical and health hazard categories are shown below. **Note: Cenex has not conducted specific toxicity tests on this product. Our hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience.**

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Light golden brown liquid

ODOR: Gasoline odor (odor threshold approximately 10 ppm).

BOILING POINT: ND @ 80°F

SPECIFIC GRAVITY (water=1): <.7890

VAPOR PRESSURE: ND @ 68°F

VAPOR DENSITY (air=1): ND

SOLUBLE IN WATER: Partially soluble

EVAPORATION RATE (ether=1): Slower

pH: N/D

Section 10 - STABILITY AND REACTIVITY

STABILITY

STABLE _X_ (At room temperature and pressure. See handling and storage section)
UNSTABLE _____

INCOMPATIBILITY -

CONDITIONS TO AVOID: Heat, sparks, flame, build-up of static electricity, and other sources of ignition should be avoided.

MATERIALS TO AVOID: Strong oxidizing agents, halogens, strong acids, and alkalies.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, and hydrocarbons.

HAZARDOUS POLYMERIZATION: Has not been reported to occur under normal temperatures and pressures.

Section 11 - TOXICOLOGY INFORMATION

Note: CHS has not conducted specific toxicity tests on this product.

Section 12 - ECOLOGICAL INFORMATION

Note: CHS has not conducted specific ecological tests on this product.

Section 13 - DISPOSAL CONSIDERATION

WASTE DISPOSAL PROCEDURES: Recycle as much of the recoverable product as possible. Do not flush to drain or storm sewer or otherwise release to the environment. Dispose of non-recyclable material as a RCRA hazardous waste, complying with federal, state and local regulations. Note: Re-evaluation of this product may be required by the user at the time of disposal, since the product uses, transformations, mixtures and processes may change classification to non-hazardous or hazardous for reasons other than, or in addition to ignitable.

Section 14 - TRANSPORTATION

DOT PROPER SHIPPING NAME: Flammable Liquid, N.O.S.* (Ethyl alcohol, Gasoline)

DOT HAZARD CLASS: 3

DOT IDENTIFICATION NUMBER: UN 1993

DOT EMER. RESPONSE GUIDE NO.: 128 (Formerly #27)

*EFFECTIVE 10/1/93 DOT's HM-181 changes how materials are classified. Proper Shipping Name-**Flammable Liquid, n.o.s.**; Hazard Class-3; UN/NA Identification #- **UN 1993**; **Packing Group II**; Placard-**FLAMMABLE LIQUID**