

# Greenergy SAFETY DATA SHEET

## For Ethanol

To msdsinfo  
 From Greenergy Fuels Limited  
 Unique Reference No. internal2  
 Date 17 Jan 2012 14:47

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE

#### 1.1 Product Identification

Substance Ethanol  
 Commercial Product Name Ethanol  
 Synonyms  
 CAS 64-17-5  
 ECHA Registration No. 01-2119457610-43-0177

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Specific Use(s) Blend component for automotive gasoline  
 Exposure Scenario(s)  
 Uses Advised Against  
 Chemical Safety Report

#### 1.3 Details of the supplier of the SDS

Company Greenergy Fuels Limited  
 High Holborn  
 London  
 WC1V 7BD  
 UNITED KINGDOM  
 Telephone No. 02074047700  
 Email msds-info@greenergy .com  
 Fax

#### 1.4 Emergency telephone number

Emergency telephone number 02074047700  
 Opening Hours

Version No	2.0
Last Updated	1 Dec 2010
Supersedes	1.0

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## 2. HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

#### 2.1.1. Classification according to Regulation (EU) 1272/2008

CLP-Classification : The product is classified as hazardous in accordance with Directive 1272/2008/EEC.

Flam. Liq. 2 H225

For the full text of classification codes and/or H-phrases in this section, see section 16.

#### 2.1.2. Classification according to EU Directives 67/548/EEC or 1999/45/EC

Classification : The product is classified as dangerous in accordance with Directive 67/548/EEC.

F; R11

For the full text of R-phrases in this section, see section 16.

### 2.2 Label elements

#### 2.2.1. Labelling according to Regulation (EU) 1272/2008

CLP pictograms :



GHS02

Signal word :

Danger

CLP Hazard statements :

H225 - Highly flammable liquid and vapour.

CLP Precautionary statements :

P210 - Keep away from sparks. - No smoking.

P233 - Keep container tightly closed

P280 - Wear protective gloves.

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P337+P313 - If eye irritation persists: Get medical advice/attention

P403+P235 - Store in a cool and well-ventilated place.

#### 2.2.2. Labelling according to Directives (67/548/EEC - 1999/45/EC)

Not relevant

### 2.3. Other hazards

No data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Substance name	Product identifier	%	Classification according to Directive 67/548/EEC
Ethanol	(CAS no) 64-17-5 (EC No) 200-578-6 (EC Index) 603-002-00-5	100	F; R11

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Substance name	Product identifier	%	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
Ethanol	(CAS no) 64-17-5 (EC No) 200-578-6 (EC Index) 603-002-00-5	100	Flam. Liq. 2, H225

For the full text of R- and H-phrases in this section, see section 16.

### 3.2. Mixtures

Not applicable

## 4. FIRST AID MEASURES

### 4.1. Description of first aid measures

Inhalation	: Keep at rest. Move to fresh air. Oxygen or artificial respiration if needed.
Skin contact	: Wash off immediately with soap and plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use.
Eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Ingestion	: Rinse mouth. Drink plenty of water.

### 4.2. Most important symptoms and effects, both acute and delayed

Inhalation	: Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
Skin contact	: Prolonged skin contact may cause skin irritation and/or dermatitis.
Eye contact	: May be irritating.
Ingestion	: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

### 4.3. Indication of immediate medical attention and special treatment needed

No data available

## 5. FIRE-FIGHTING MEASURES

### 5.1. Extinguishing media

Suitable extinguishing media	: Use dry chemical, CO <sub>2</sub> , water spray or alcohol resistant foam.
Extinguishing media which shall not be used for safety reasons	: High volume water jet

### 5.2. Special hazards arising from the substance or mixture

Fire Hazard	: Highly flammable.
Specific hazards	: Evacuate personnel to safe areas. Vapours may form explosive mixture with air. Vapours are heavier than air and may spread along floors. The pressure in sealed containers can increase under the influence of heat. Flash back possible over considerable distance. Burning produces noxious and toxic fumes. Cool containers / tanks with water spray. Possible decomposition products are: CO <sub>x</sub> Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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### **5.3. Advice for firefighters**

Special protective equipment for fire-fighters : Wear personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary.

## **6. ACCIDENTAL RELEASE MEASURES**

### **6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions : Wear personal protective equipment. See also section 8 Do not breathe vapours or spray mist. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Do not smoke. Keep away from open flames, hot surfaces and sources of ignition. Ensure all equipment is electrically grounded before beginning transfer operations.

### **6.2. Environmental precautions**

Environmental precautions : Do not flush into surface water or sanitary sewer system.

### **6.3. Methods and materials for containment and cleaning up**

Methods for cleaning up : Remove all sources of ignition. Do not use tools which may produce sparks. Prevent further leakage or spillage if safe to do so. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Dispose of in accordance with local regulations.

## **7. HANDLING AND STORAGE**

### **7.1. Precautions for safe handling**

Handling : Wear personal protective equipment. See also section 8 Do not breathe vapours or spray mist. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Keep away from open flames, hot surfaces and sources of ignition. Do not smoke. Always replace cap after use. Do not burn, or use a cutting torch on, the empty drum. Do not puncture or incinerate. Ensure all equipment is electrically grounded before beginning transfer operations.

### **7.2. Conditions for safe storage, including any incompatibilities**

Storage : Keep tightly closed in a dry, cool and well-ventilated place. Store in original container. Keep away from open flames, hot surfaces and sources of ignition. Keep away from direct sunlight. Do not store near or with any of the incompatible materials listed in section 10.

Hygiene measures : Use only in area provided with appropriate exhaust ventilation. Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product.

### **7.3. Specific end use(s)**

Specific use(s) : See chapter Exposure scenario.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1. Control parameters**

**Component** : **Ethanol (64-17-5)**  
 TLV-TWA (mg/m<sup>3</sup>) : 260 (NL); 950 (NO); 960 (DE, CH,SK); 1000 (SE, CS, ET, LT, BG, LV, RU); 1900 (DA, FR, FI, GR, AT, HU, SL, HR, PL); 1907 (BE); 1910 (ES); 1920 (GB); 1000 ppm (PT)  
 TLV-STEL (mg/m<sup>3</sup>) : 1900 (LT, ET, NL, SE); 1920 (CH, SK, DE); 2500 (FI); 3000 (CS); 3800 (AT); 9500 (FR)

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DNEL : Exposure scenario  
PNEC : Exposure scenario

### **8.2. Exposure controls**

Respiratory protection : Ensure adequate ventilation. not required under normal use In case of insufficient ventilation wear suitable respiratory equipment. Recommended Filter type: (type A - EN 141) Full face mask (EN 136) Respirator with a half face mask (EN 140)

Hand protection : Nitrile rubber - butyl-rubber (EN 374) The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves.

Eye protection : Safety glasses (EN166)

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1. Information on basic physical and chemical properties**

Appearance : liquid  
Colour : colourless  
Odour : alcohol-like

pH : no data available  
Boiling point/boiling range : 78 °C  
Melting point/range : -114 °C  
Flash point : 12 °C  
Autoignition temperature : ~ 425 °C  
Explosive properties : LEL: 3,4 %  
Oxidizing properties : not applicable  
Evaporation rate : 3,4  
Vapour pressure : ~ 57,3 hPa @ 20°C  
Vapour density : 1,59  
Water solubility : miscible  
Viscosity : no data available  
Density : 0,79  
Partition coefficient: n-octanol/water : ~ -0,32

### **9.2. Other information**

No data available

## **10. STABILITY AND REACTIVITY**

### **10.1. Reactivity**

Reactivity : Flammable liquid  
See also section 10.5

### **10.2. Chemical stability**

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Stability : Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

Conditions to avoid : Keep away from heat and sources of ignition. Exposure to sunlight.

**10.5. Incompatible materials**

Incompatible materials : Oxidizing agent , Acids and bases

**10.6. Hazardous decomposition products**

Hazardous decomposition products : Burning produces noxious and toxic fumes. Possible decomposition products are: COx

**11. TOXICOLOGICAL INFORMATION**

**11.1. Information on toxicological effects**

**General Information**

**Acute toxicity**

**Component** : **Ethanol (64-17-5)**  
LD50/oral/rat : 1501 mg/kg

Inhalation : Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.  
Skin contact : Prolonged skin contact may cause skin irritation and/or dermatitis.  
Eye contact : May be irritating.  
Ingestion : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Chronic toxicity**

Chronic toxicity : No adverse effects are expected.

**Further information**

No data available

**12. ECOLOGICAL INFORMATION**

**12.1. Toxicity**

Ecotoxicity effects : not hazardous  
**Component** : **Ethanol (64-17-5)**  
LC50/96h/fish : 14200 mg/l (Pimephales promelas)

**12.2. Persistence and degradability**

Persistence and degradability : Readily biodegradable.

**12.3. Bioaccumulative potential**

Bioaccumulation : log Pow = -0,32  
Partition coefficient: n-octanol/water : ~ -0,32

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#### **12.4. Mobility in soil**

Mobility : miscible

#### **12.5. Results of PBT and vPvB assessment**

No data available

#### **12.6. Other adverse effects**

No data available

### **13. DISPOSAL CONSIDERATIONS**

#### **13.1. Waste treatment methods**

- Waste from residues / unused products : Dispose of in accordance with local regulations. Do not burn, or use a cutting torch on, the empty drum. Do not puncture or incinerate.
- Codes of waste (2001/573/EC, 75/442/EEC, 91/689/EEC) : Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities. The following Waste Codes are only suggestions: 070104 - other organic solvents, washing liquids and mother liquors 150110 - packaging containing residues of or contaminated by dangerous substances

### **14. TRANSPORT INFORMATION**

#### **14.1. UN Number**

UN number : 1170

#### **14.2. UN proper shipping name**

Proper shipping name : ETHANOL (ETHYL ALCOHOL)

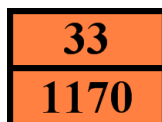
#### **14.3. Transport hazard class(es)**

##### **14.3.1. Overland transport**

Class : 3 - Flammable liquids  
 Danger code : 33  
 ADR classification code : F1  
 ADR danger labels : 3 - Flammable liquid



Orange plates :



ADR tunnel restriction code : D/E  
 ADR limited quantities : LQ04  
 ADR excepted quantities : E2

#### **Inland waterway transport (ADN/ADNR)**

ADNR class : 3

##### **14.3.2. Transport by sea**

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Class : 3 - Flammable liquids

**14.3.3. Air transport**

Class : 3 - Flammable liquids

**14.4. Packing group**

Packing group : II

**14.5. Environmental hazards**

Other information (transport) : No supplementary information available.

**14.6. Special precautions for users**

No data available

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No data available

**15. REGULATORY INFORMATION**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**15.1.1. EU-Regulations**

No data available

**15.1.2. National regulations**

WGK : 1

**15.2. Chemical Safety Assessment**

Chemical Safety assessment : A Chemical Safety Assessment has been carried out for this substance.

**16. OTHER INFORMATION**

Text of R phrases mentioned in Section 3 : R11 -Highly flammable.

H-statements components : H225 -Highly flammable liquid and vapour.

Sources of key data used to compile the datasheet : European Chemicals Bureau

Updated sections : 2,3,4,10,16

The contents and format of this SDS are in accordance with EEC Commission Directive 1999/45/EC, 67/548/EC, 1272/2008/EC and EEC Commission Regulation 1907/2006/EC (REACH) Annex II.

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# SUMMARY OF CHANGES

For 64-17-5

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The following changes have been made to this eSDS:

**Version 1.0 updated to Version 2.0 - 24 Jun 2009**

- Sections 2-16 updated

**Version - updated to Version 1.0 - 24 Jun 2009**

- Sections 2-16 updated