

# Safety Data Sheet

## 1.0 IDENTIFICATION OF THE SUBSTANCE / MIXTURE

### 1.1 Product Identification

Substance	Denatured <b>Ethanol</b>
Commercial Product Name	Fuel Grade <b>Ethanol (gasoline denatured)</b>
Synonyms	Denatured <b>Ethanol</b>
CAS	<b>64-17-5</b>
ECHA Registration No.	<b>01-2119457610-43-0177</b>

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

Specific Use(s)	<b>Blend component for automotive gasoline</b>
Exposure Scenario(s)	Exposure scenarios for ethanol
Uses Advised Against	
Chemical Safety Report	

### 1.3 Details of the supplier of the SDS

Company	<b>Greenergy Fuels Limited High Holborn London WC1V 7BD UNITED KINGDOM</b>
Telephone No.	<b>02074047700</b>
Email	<a href="mailto:msds-info@greenergy.com">msds-info@greenergy.com</a>

### 1.4 Emergency telephone number

Emergency telephone number	<b>+44 (0)1235 836 100</b>
Opening Hours	<b>24 / 7</b>

Version No	2.0
Last Updated	12 July 2016
Supersedes	1.1

## 2.0 HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

#### 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 - Highly flammable liquid and vapour.
Eye Irrit. 2	H319 - Causes serious eye irritation.
Muta. 1B	H340 - May cause genetic defects.
Carc. 1B	H350 - May cause cancer.

### 2.2 Label elements

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

CLP pictograms:



GHS02

Signal word: Danger

CLP Hazard statements: H225 – Highly flammable liquid and vapour.  
H319 - Causes serious eye irritation.  
H340 - May cause genetic defects.  
H350 - May cause cancer.

CLP Precautionary statements: P210 - Keep away from sparks. - No smoking.  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313 - IF exposed or concerned: Get medical advice/attention.

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

Not relevant

#### Other Hazards

Other hazards: This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

### 3.0 COMPOSITION / INFORMATION ON INGREDIENTS

#### 3.1 Substances

Not applicable

#### 3.2 Mixtures

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	98 - 100	H225 - Flam. Liq. 2 H319 - Causes serious eye irritation.
Gasoline	CAS no: 86290-81-5 EC no: 289-220-8 EC Index: 649-378-00-4	0 - 2	Flam. Liq. 1, H224 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Muta. 1B, H340 Carc. 1B, H350 STOT SE 3, H336 Aquatic Chronic 2, H411 Repr. 2, H361fd

### 4.0 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. Get immediate medical advice/attention.
Ingestion:	Rinse mouth. Drink plenty of water. Get immediate medical advice/attention.

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

Inhalation:	May cause respiratory irritation. 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:	Contact with eyes may cause irritation.
Ingestion:	Harmful: may cause lung damage if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Other adverse effects:	Carcinogenic Mutagenic.

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

No data available

## 5.0 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 liquid and vapour

Specific hazards: 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.  
Vapours can travel considerable distances to a source of ignition where they can ignite, flash back, or explode.  
Burning produces noxious and toxic fumes.  
Cool containers / tanks with water spray.  
Possible decomposition products are: COx  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### 5.3 Advice for firefighters

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

## 6.0 ACCIDENTAL RELEASE MEASURES

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

Personal precautions: Remove all sources of ignition. Evacuate area. 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. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dam up. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Dispose of in accordance with local regulations.

## 7.0 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. Keep away from food and drink. Always replace cap after use. Do not burn. 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 Exposure scenarios

## 8.0 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)  
**DNEL:** see Exposure scenarios  
**PNEC:** see Exposure scenarios

**Component:** Gasoline (86290-81-5)  
**TLV-TWA (ppm):** 300 (CH, VLA-ED Spain, 2008)  
**TLV-TWA (mg/m<sup>3</sup>):** 1100 (CH), 250 (UT4, Kraftstoff, DE); mist: 5 (BE, GB, FR, NL, ES, FI, DK, NO); mist:1 (SE);  
**TLV-STEL (mg/m<sup>3</sup>):** mist: 10 (BE, GB); mist: 3 (SE)

### 8.2 Exposure controls

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

**Hand protection:** Wear chemically resistant gloves tested for breakthrough time for Ethanol in accordance with EN374. 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 (EN 166)

## 9.0 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance:	liquid
Colour:	colourless
Odour:	alcohol-like
pH:	not applicable
Boiling point/boiling range:	ca 78 °C
Melting point/range:	<< 0°C
Flash point:	ca 12 °C
Auto-ignition temperature:	ca 425 °C
Explosive properties:	LEL ca 3.4%
Oxidizing properties:	not applicable
Evaporation rate:	ca 3.4
Vapour pressure:	ca 57.3 kPa @ 20°C
Vapour density:	ca 1.59
Solubility in other solvents:	miscible
Viscosity:	ca 1.2 mPa.s @ 20°C
Density:	ca 0.79 g/cm <sup>3</sup> @ 15°C
Partition coefficient:	for Ethanol ~ -0.32 (n-octanol/water)

### 9.2 Other information

No data available

## 10.0 STABILITY AND REACTIVITY

### 10.1 Reactivity

Reactivity: Flammable liquid

See also section 10.5

### 10.2 Chemical stability

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: CO<sub>x</sub>.

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### General Information

##### Acute toxicity

**Component:** Ethanol (64-17-5)

LD50/oral/rat: 1501 mg/kg  
 LC50 (inhalation/rat): >5.2 mg/l/4 h  
 LD50 (dermal/rabbit): >2000 mg/kg

**Component:** Gasoline (86290-81-5)

LD50/oral/rat: >5000 mg/kg (ARCO, 1986b)  
 LC50 (inhalation/rat): >5.2 mg/l/4 h (ARCO, 1992)  
 LD50 (dermal/rabbit): >2000 mg/kg (ARCO, 1986a)

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: Contact with eyes may cause irritation.

Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

##### Chronic toxicity:

Germ cell mutagenicity: May cause genetic defects.  
 Carcinogenicity: May cause cancer.

##### Further information

No data available

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

Ecotoxicity effects: Not hazardous.

**Component:** Ethanol (64-17-5)

LC50/96h/fish: 14,200 mg/l (Pimephales promelas)

**Component:** Gasoline (86290-81-5)

LC50/96h/fish: 1 - 10 mg/l (Rainbow trout)

### 12.2 Persistence and degradability

Persistence and degradability: Readily biodegradable.

### 12.3 Bioaccumulative potential

Bioaccumulation: (ethanol) log Pow = -0,32  
 (gasoline) log Kow =  $\geq 3$

### 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

# 13.0 DISPOSAL CONSIDERATIONS

## 13.1 Waste treatment methods

Waste from residues / unused products: In accordance with local and national regulations. Do not burn, or use a cutting torch on, the empty drum. Do not puncture or incinerate. Do not allow to enter into surface water or drains.

Contaminated packaging: Do not puncture or incinerate. Do not burn, or use a cutting torch on, the empty drum. Never use pressure to empty container. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Codes of waste (2001/573/EC, 75/442/EEC, 91/689/EEC): The following Waste Codes are only suggestions:  
130703 - other fuels (including mixtures)  
Waste codes should be assigned by the user based on the application for which the product was used.

# 14. TRANSPORT INFORMATION

## 14.1 UN Number

UN number: 3475

## 14.2 UN proper shipping name

Proper shipping name : ETHANOL AND GASOLINE MIXTURE

## 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  
limited quantities: LQ04  
ADR excepted quantities: E2



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

ADNR class: 3

**14.3.2 Transport by sea**

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

**15.0 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. National regulations**

DE WGK: 3

**15.2 Chemical Safety Assessment**

Chemical Safety assessment: A Chemical Safety Assessment has been carried out for the following substances of this mixture.

Ethanol  
Gasoline**16.0 OTHER INFORMATION**

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

Updated sections: All sections reviewed and re-formatted

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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