1. IDENTIFICATION

GHS Product Identifier
E85

Company Name
UNITED PETROLEUM PTY LTD

Address
200 Hoddle Street Abbotsford
Vic 3067 Australia

Telephone/Fax Number
Tel: (03)9413 1400
Fax: (03)9413 1401

Emergency phone number
1300 131 001

Recommended use of the chemical and restrictions on use
Ethanol based fuel

Other Names

<table>
<thead>
<tr>
<th>Name</th>
<th>Product Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHANOL 85</td>
<td></td>
</tr>
<tr>
<td>85% ETHANOL + 15% ULP</td>
<td></td>
</tr>
<tr>
<td>85% ETHANOL + 15% ULP91</td>
<td></td>
</tr>
<tr>
<td>85% ETHANOL + 15% UNLEADED PETROL</td>
<td></td>
</tr>
</tbody>
</table>

2. HAZARD IDENTIFICATION

GHS classification of the substance/mixture
Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia
Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)

Acute Toxicity - Dermal: Category 4
Acute Toxicity - Inhalation: Category 4
Acute Toxicity - Oral: Category 4
Aspiration Hazard: Category 1
Carcinogenicity category 1B
Eye Damage/Irritation: Category 2A
Flammable Liquids: Category 2
Germ cell mutagenicity category 1B
Skin Corrosion/Irritation: Category 2

Signal Word (s)
DANGER

Hazard Statement (s)
H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H340 May cause genetic defects.
H350 May cause cancer.

Pictogram (s)
Flame, Exclamation mark, Health hazard

Precautionary statement – Prevention
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement – Response
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P331 Do NOT induce vomiting.
P332+P313 IF skin irritation occurs: Get medical advice/attention.
P337+P313 IF eye irritation persists: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P370+P378 In case of fire: Use carbon dioxide, dry chemical or foam. Alcohol resistant foam is preferred for extinction.

Precautionary statement – Storage
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.

Precautionary statement – Disposal
P501 Dispose of contents/container to an approved waste disposal plant.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on Composition
Additives contain Green Dye (0.001%)

Composition of Green Dye
1330-20-7 - Xylene (25-35%)
4. FIRST-AID MEASURES

Inhalation
If inhaled, remove affected person from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.

Ingestion
Do NOT induce vomiting. Wash out mouth and lips with water. Where vomiting occurs naturally have affected person place head below hip level in order to reduce risk of aspiration. Seek immediate medical attention.

Skin
Remove all contaminated clothing immediately. Wash affected area thoroughly with soap and water. Wash contaminated clothing before reuse or discard. Seek medical attention.

Eye contact
If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. Seek medical attention.

First Aid Facilities
Eyewash, safety shower and normal washroom facilities.

Advice to Doctor
Treat symptomatically.

Other Information
For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Carbon dioxide, dry chemical or foam. Alcohol resistant foam is preferred. If not available normal foam can be used.

Unsuitable Extinguishing Media
Do not use water jet.

Hazards from Combustion Products
Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide and oxides of nitrogen.

Specific Hazards Arising From The Chemical
Highly flammable liquid and vapour. Vapour/air mixtures may ignite explosively. Flashback along the vapour trail may occur. Runoff to sewer may create fire or explosion hazard.

Hazchem Code
•3YE

Decomposition Temperature
Not available

Precautions in connection with Fire
Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. In case of fire the product may be violently or explosively reactive. Use water spray to disperse vapours. This product should be prevented from entering drains and watercourses.
6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures
Wear appropriate personal protective equipment and clothing to prevent exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Wear appropriate personal protective equipment and clothing to prevent exposure. Handle and use the material in a well-ventilated area, away from sparks, flames and other ignition sources. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Work from suitable, labelled, fire-resistant containers. Open containers carefully as they may be under pressure. Keep containers tightly closed. Flameproof equipment is necessary in areas where the product is being used. Take precautionary measures against static discharges. Earth or bond all equipment. Do not empty into drains. Ensure a high level of personal hygiene is maintained when using this product, that is, always wash hands before eating, drinking, smoking or using the toilet facilities. Avoid exposure. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, strong acids, foodstuffs, and clothing. Keep containers closed when not in use, securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. Ensure that storage conditions comply with applicable local and national regulations.

For information on the design of the storeroom, reference should be made to Australian Standard AS1940 - The storage and handling of flammable and combustible liquids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit values
Ethanol
TWA: 1000 ppm, 1800 mg/m³

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

Biological Limit Values
No biological limits allocated.

Appropriate Engineering Controls
This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. A flame-proof exhaust ventilation system is required. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure standards, suitable respiratory protection must be worn. Refer to relevant regulations for further information concerning ventilation requirements.
Refer to AS 1940 - The storage and handling of flammable and combustible liquids and AS/NZS 60079.10.1:2009 Explosive atmospheres - Classification of areas - Explosive gas atmospheres, for further information concerning ventilation requirements.

Respiratory Protection
If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.
Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye Protection
Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.
**Hand Protection**
Wear gloves of impervious material such as PVC or neoprene. Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.
Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

**Body Protection**
Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Properties</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Green</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>78°C (Ethanol) 25-228°C (Unleaded petrol)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.79-0.81 (Ethanol) 0.73 (approximate)(Unleaded petrol)</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>44mmHg (20°C) 35-90kPa (Unleaded petrol)</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available</td>
</tr>
<tr>
<td>Partition Coefficient: n-octanol/water</td>
<td>Not available</td>
</tr>
<tr>
<td>Flammability</td>
<td>Highly flammable</td>
</tr>
<tr>
<td>Flammable Limits - Lower</td>
<td>3.5% (Ethanol) 1% (Unleaded petrol)</td>
</tr>
<tr>
<td>Flammable Limits - Upper</td>
<td>19% (Ethanol) 8% (Unleaded petrol)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Properties</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear - green colour liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>Characteristic fuel odour</td>
</tr>
<tr>
<td>Melting Point</td>
<td>-117°C (Ethanol)</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Complete (Ethanol) Negligible (Unleaded petrol)</td>
</tr>
<tr>
<td>pH</td>
<td>Not available</td>
</tr>
<tr>
<td>Vapour Density (Air=1)</td>
<td>1.59 (Ethanol) 3.5 (Unleaded petrol)</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>13°C (Ethanol) -40°C (Unleaded petrol) Method: Abel closed cup</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>392°C (Ethanol) &gt;250°C (Unleaded petrol)</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Chemical Stability**
Stable under normal conditions of storage and handling.

**Reactivity and Stability**
React with incompatible materials

**Conditions to Avoid**
Heat, open flames and other sources of ignition.

**Incompatible materials**
Incompatible with oxidising agents (eg. Hypochlorites, peroxides), acids (sulphuric acid), strong alkalis (eg. Hydroxides).

**Hazardous Decomposition Products**
Thermal decomposition may result in the release of toxic and/or irritating fumes and gases including oxides of nitrogen, carbon monoxide and carbon dioxide.

**Possibility of hazardous reactions**
Not available
Hazardous Polymerization
Will not occur.

11. TOXICOLOGICAL INFORMATION

**Toxicology Information**
The available acute toxicity data is given below.

**Acute Toxicity - Oral**
LD50 (rat): 7060 mg/kg (literature)

**Acute Toxicity - Inhalation**
LC50 (rat): 38 mg/l/10h (literature)

**Ingestion**
Harmful if swallowed. May be fatal if swallowed and enters airways. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause severe pulmonary injury that may lead to death. May cause irritation to the mouth, throat, esophagus and stomach with symptoms of nausea, abdominal discomfort, vomiting and diarrhoea. Swallowing ethanol can cause drunkenness or harmful central nervous system effects. The deliberate ingestion of ethanol is a known occupational risk. As little as 50 - 100 ml intake in a shift in a 70kg worker may cause inebriation to the point where safety is impaired. Effects of a small intake may include excitation, euphoria, headache, dizziness, drowsiness, blurred vision, and fatigue. Drinking a large amount may lead to severe acute intoxication, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death.

**Inhalation**
Harmful if inhaled. Inhalation of product vapours can cause irritation of the nose, throat and respiratory system.

**Skin**
Harmful in contact with skin. Causes skin irritation. Skin contact will cause redness, itching and swelling. Repeated exposure may cause skin dryness and cracking and may lead to dermatitis.

**Eye**
Causes serious eye irritation. On eye contact this product will cause tearing, stinging, blurred vision, and redness.

**Respiratory sensitisation**
Not expected to be a respiratory sensitiser.

**Skin Sensitisation**
Not expected to be a skin sensitiser.

**Germ cell mutagenicity**
May cause genetic defects. Classified as Known or presumed to induce heritable mutations.

**Carcinogenicity**
May cause cancer. Classified as a Known or presumed human carcinogen.

**Reproductive Toxicity**
Not considered to be toxic to reproduction.

**STOT-single exposure**
Not expected to cause toxicity to a specific target organ.

**STOT-repeated exposure**
Not expected to cause toxicity to a specific target organ.

**Aspiration Hazard**
May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

**Ecotoxicity**
The available ecological data is given below.

**Persistence and degradability**
Ethanol:
Biodegradable, 94% elimination
Mobility
See section 12 Persistence/ Degradability

Bioaccumulative Potential
Not available

Other Adverse Effects
Not available

Environmental Protection
Do not discharge this material into waterways, drains and sewers.

Acute Toxicity - Fish
Ethanol:
LC0 (Golden ide): >1000mg/l/48h

Acute Toxicity - Daphnia
Ethanol:
EC50 (Daphnia magna) : >1000mg/l/24h

13. DISPOSAL CONSIDERATIONS

Disposal considerations
Dispose of waste according to applicable local and national regulations. Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes including emptied containers are controlled wastes and should be disposed of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Transport Information
Road and Rail Transport (ADG Code):
This material is a Class 3 - Flammable Liquid according to The Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)
Class 3 - Flammable Liquids are incompatible in a placard load with any of the following:
- Class 1, Explosives
- Division 2.1, Flammable Gases, (Division 2.1 and Class 3 are incompatible in transport if both are in tanks or other receptacles with a capacity individually exceeding 500 L.)
- Division 2.3, Toxic Gases
- Division 4.2 Spontaneously Combustible Substances
- Division 5.1 Oxidising Agents and Division 5.2, Organic Peroxides
- Class 6 Toxic or Infectious Substances (where the flammable liquid is nitromethane)
- Class 7: Radioactive materials unless specifically exempted

Marine Transport (IMO/IMDG):
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.
Class/Division: 3
UN No: 3475
Proper Shipping Name: ETHANOL AND GASOLINE MIXTURE
Packing Group: II
EMS : F-E, S-E
Special Provisions: 333, 363

Air Transport (ICAO/IATA):
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.
Class/Division: 3
UN No: 3475
Proper Shipping Name: Ethanol and gasoline mixture
Packing Group: II
Packaging Instructions (passenger & cargo): 353
Packaging Instructions (cargo only): 364
Hazard Label: Flammable Liquid
Special Provisions: A156

U.N. Number
3475

UN proper shipping name
ETHANOL AND PETROL MIXTURE

Transport hazard class(es)
3

Packing Group
II

Hazchem Code
•3YE

Special Precautions for User
Not available

IERG Number
14

IMDG Marine pollutant
No

Transport in Bulk
Not available

15. REGULATORY INFORMATION

Regulatory information
Classified as Hazardous according to the Globally Harmonised System of classification and labelling of chemicals (GHS) including Work, Health and Safety regulations, Australia.
Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule
Not Scheduled

Australia (AICS)
All components of this product are listed on the Inventory or exempted.

16. OTHER INFORMATION

Date of preparation or last revision of SDS
SDS reviewed: February 2017, Supersedes: January 2014

References
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
Standard for the Uniform Scheduling of Medicines and Poisons.
Australian Code for the Transport of Dangerous Goods by Road & Rail.
Model Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Workplace exposure standards for airborne contaminants.
Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).
Globally Harmonised System of classification and labelling of chemicals.

END OF SDS