SAFETY DATA SHEET

Diesel Reference Fuel U-32

According to GB/T 16483 and GB/T 17519

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product information

Product Name: Diesel Reference Fuel U-32
Material: 1108915, 1024281, 1024280, 1032195, 1024277, 1024279, 1024278

Use: Reference Fuel

Company: Chevron Phillips Chemical Company LP
Specialty Chemicals
10001 Six Pines Drive
The Woodlands, TX 77380

Local: Chevron Phillips Chemicals (Shanghai) Corporation
Room 1810-1812, Shanghai Mart,
2299 Yan An Road (W),
Shanghai, PRC 200336

Emergency telephone:

Health:
866.442.9628 (North America)
1.832.813.4984 (International)
Transport:
CHEMTREC 800.424.9300 or 703.527.3887 (int'l)
Asia: CHEMWATCH (+612 9186 1132) China: 0532 8388 9090
EUROPE: BIG +32.14.585454 (phone) or +32.14583516 (telefax)
Mexico CHEMTREC 01-800-681-9531 (24 hours)
South America SOS Cotec Inside Brazil: 0800.111.767 Outside Brazil: +55.19.3467.1600
Argentina: +(54)-1159839431

Responsible Department: Product Safety and Toxicology Group
E-mail address: SDS@CPChem.com
Website: www.CPChem.com

SECTION 2: Hazards identification

Classification of the substance or mixture
GHS Classification and Labeling: Follow GB 13690, GB 15258 and GB 30000.2 to GB 30000.29 (GHS 2011)
Emergency Overview

Danger

**Physical state:** Liquid  **Color:** Yellow  **Odor:** Mild

Hazards:
- Flammable liquid and vapor. Causes skin irritation. May cause cancer. May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Classification

- Flammable liquids, Category 3
- Skin corrosion/irritation, Category 2
- Carcinogenicity, Category 1B
- Specific target organ toxicity - repeated exposure, Category 2, Blood, Liver, thymus gland
- Aspiration hazard, Category 1
- Short-term (acute) aquatic hazard, Category 1
- Long-term (chronic) aquatic hazard, Category 1

Labeling

Symbol(s):

![Symbol Image]

Signal Word: Danger

Hazard Statements:
- H226: Flammable liquid and vapor.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H350: May cause cancer.
- H373: May cause damage to organs (Blood, Liver, thymus gland) through prolonged or repeated exposure.
- H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

**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.
- P260: Do not breathe dust/fume/gas/mist/vapor/spray.
- P264: Wash skin thoroughly after handling.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response:**
- P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor.
Diesel Reference Fuel U-32

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P308 + P313: IF exposed or concerned: Get medical advice/attention.
P331: Do NOT induce vomiting.
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P362+P364: Take off contaminated clothing and wash it before reuse.
P370+P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391: Collect spillage.

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

Disposal:
P501: Dispose of contents/container to an approved waste disposal plant.

SECTION 3: Composition/information on ingredients

Synonyms: Diesel Reference Fuel U
Molecular formula: Mixture

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No. / EINECS-No.</th>
<th>Concentration [wt%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Cycle Oil</td>
<td>64741-59-9</td>
<td>60 - 70</td>
</tr>
<tr>
<td>C12-C14 Isoalkanes</td>
<td>68551-19-9</td>
<td>30 - 40</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

General advice: Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Material may produce a serious, potentially fatal pneumonia if swallowed or vomited.

If inhaled: If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.

In case of skin contact: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.

In case of eye contact: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed: Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Take victim immediately to hospital.
### SECTION 5: Firefighting measures

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flash point</strong></td>
<td>48 °C (118 °F)</td>
</tr>
<tr>
<td>Method</td>
<td>Tag closed cup</td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Suitable extinguishing media</strong></td>
<td>Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemical.</td>
</tr>
<tr>
<td><strong>Unsuitable extinguishing media</strong></td>
<td>High volume water jet.</td>
</tr>
<tr>
<td><strong>Specific hazards during fire fighting</strong></td>
<td>Do not allow run-off from fire fighting to enter drains or water courses.</td>
</tr>
<tr>
<td><strong>Special protective equipment for fire-fighters</strong></td>
<td>Wear self-contained breathing apparatus for firefighting if necessary.</td>
</tr>
<tr>
<td><strong>Further information</strong></td>
<td>Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.</td>
</tr>
<tr>
<td><strong>Fire and explosion protection</strong></td>
<td>Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.</td>
</tr>
<tr>
<td><strong>Hazardous decomposition products</strong></td>
<td>Carbon oxides.</td>
</tr>
</tbody>
</table>

### SECTION 6: Accidental release measures

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal precautions</strong></td>
<td>Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.</td>
</tr>
<tr>
<td><strong>Environmental precautions</strong></td>
<td>Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.</td>
</tr>
<tr>
<td><strong>Methods for cleaning up</strong></td>
<td>Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).</td>
</tr>
</tbody>
</table>

### SECTION 7: Handling and storage

**Handling**
Advice on safe handling: Avoid formation of aerosol. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion: Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage areas and containers: No smoking. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

Use: Reference Fuel

SECTION 8: Exposure controls/personal protection

Ingredients with workplace control parameters

Chevron Phillips Chemical Company LP

<table>
<thead>
<tr>
<th>Components</th>
<th>Basis</th>
<th>Value</th>
<th>Control parameters</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12-C14 Isoalkanes</td>
<td>Manufacturer</td>
<td>TWA</td>
<td>1,200 mg/m³</td>
<td>RCP.</td>
</tr>
</tbody>
</table>

RCP = Reciprocal Calculation Procedure

Not applicable

Engineering measures

Adequate ventilation to control airborne concentrations below the exposure guidelines/limits. Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

Personal protective equipment

Respiratory protection: Wear a supplied-air NIOSH approved respirator unless ventilation or other engineering controls are adequate to maintain minimal oxygen content of 19.5% by volume under normal atmospheric pressure. Wear a NIOSH approved respirator that provides protection when working with this material if exposure to harmful levels of airborne material may occur, such as: Air-Purifying Respirator for Organic Vapors. Use a positive pressure, air-supplying respirator if there is
potential for uncontrolled release, exposure levels are not known, or other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection: The suitability for a specific workplace should be discussed with the producers of the protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye protection: Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Wear as appropriate: Flame retardant antistatic protective clothing. Workers should wear antistatic footwear.

Hygiene measures: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
</tr>
<tr>
<td>Flash point</td>
<td>48 °C (118 °F)</td>
</tr>
<tr>
<td>Method</td>
<td>Tag closed cup</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
<tr>
<td>Molecular formula</td>
<td>Mixture</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>Not applicable</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Pour point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>176 - 317 °C (349 - 603 °F)</td>
</tr>
</tbody>
</table>
# Diesel Reference Fuel U-32

**Version 1.12**

**Revision Date 2019-08-02**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.869</td>
</tr>
<tr>
<td></td>
<td>at 15.6 °C (60.1 °F)</td>
</tr>
<tr>
<td>Density</td>
<td>0.8690 g/cm³</td>
</tr>
<tr>
<td>Bulk density</td>
<td>7.25 L/G</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Negligible</td>
</tr>
<tr>
<td>Partition coefficient: n-</td>
<td>Octanol/water</td>
</tr>
<tr>
<td></td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>1.898 cSt</td>
</tr>
<tr>
<td></td>
<td>at 40 °C (104 °F)</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>(Air = 1.0)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>&gt; 99 %</td>
</tr>
</tbody>
</table>

## SECTION 10: Stability and reactivity

**Reactivity**

Stable under recommended storage conditions.

**Chemical stability**

This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

**Possibility of hazardous reactions**

**Hazardous reactions**

Hazardous reactions: Hazardous polymerization does not occur.

Further information: No decomposition if stored and applied as directed.

Hazardous reactions: Vapors may form explosive mixture with air.

**Conditions to avoid**

Heat, flames and sparks.

**Materials to avoid**

May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

**Thermal decomposition**

No data available

**Hazardous decomposition products**

Carbon oxides

**SDS Number:** 100000100096
SECTION 11: Toxicological information

**Diesel Reference Fuel U-32**

**Acute oral toxicity**
- LD50: > 5,000 mg/kg
  - Species: Rat
  - Method: Acute toxicity estimate

**Acute inhalation toxicity**
- LC50: > 20 mg/l
  - Exposure time: 4 h
  - Species: Rat
  - Test atmosphere: dust/mist
  - Method: Acute toxicity estimate

**Acute dermal toxicity**
- LD50: > 5,000 mg/kg
  - Species: Rabbit
  - Method: Acute toxicity estimate

**Skin irritation**
- Skin irritation largely based on animal evidence.

**Eye irritation**
- May irritate eyes.

**Sensitization**
- Does not cause sensitization.

**Repeated dose toxicity**

**Light Cycle Oil**
- Species: Rat, males
  - Sex: males
  - Application Route: Dermal
  - Dose: 0, 8, 25, 125, 500, 1250 mg/kg
  - Exposure time: 90 day
  - Number of exposures: 5 days/wk
  - NOEL: 25 mg/kg
  - Target Organs: Blood, Liver, Thymus

- Species: Rat, females
  - Sex: females
  - Application Route: Dermal
  - Dose: 0, 8, 25, 125, 500, 1250 mg/kg
  - Exposure time: 90 day
  - Number of exposures: 5 days/wk
  - NOEL: 125 mg/kg
  - Target Organs: Blood, Liver, Thymus

**C12-C14 Isoalkanes**
- Species: Rat, male and female
  - Sex: male and female
  - Application Route: oral gavage
  - Dose: 500, 2500, 5000 mg/kg/d
Exposure time: 13 wk
Number of exposures: daily
NOEL: $\geq 5000$ mg/kg/d
Method: OECD Test Guideline 408
No adverse effects expected
Information given is based on data obtained from similar substances.

Species: Rat, male and female
Sex: male and female
Application Route: Dermal
Dose: 165, 330, 495 mg/kg
Exposure time: 13 wk
Number of exposures: 5 d/wk
NOEL: $> 495$ mg/kg/d
Method: OECD Guideline 411
No adverse effects expected
Information given is based on data obtained from similar substances.

Species: Rat, male and female
Sex: male and female
Application Route: Inhalation
Dose: 5, 10, 30 mg/L
Exposure time: 90 d
Number of exposures: 6 h/d
NOEL: $> 30$ mg/L
Method: OECD Test Guideline 413
No adverse effects expected
Information given is based on data obtained from similar substances.

**Genotoxicity in vitro**

**Light Cycle Oil**
- Test Type: Modified Ames test
  - Result: positive
- Test Type: Mouse lymphoma assay
  - Result: positive
- Test Type: Sister Chromatid Exchange Assay
  - Result: negative

**C12-C14 Isoalkanes**
- Test Type: Ames test
  - Metabolic activation: with and without metabolic activation
    - Result: negative
- Test Type: Mouse lymphoma assay
  - Metabolic activation: with and without metabolic activation
    - Result: negative
- Test Type: Sister Chromatid Exchange Assay
  - Metabolic activation: with and without metabolic activation
    - Result: negative

**Genotoxicity in vivo**

**Light Cycle Oil**
- Test Type: Cytogenetic assay
  - Result: negative
Diesel Reference Fuel U-32

Carcinogenicity:
Remarks: May cause cancer.

Reproductive toxicity:
C12-C14 Isoalkanes:
Species: Rat
Sex: male and female
Application Route: oral gavage
Dose: 50, 200, 750 mg/kg/bw/d
Number of exposures: daily
Test period: 70 d
Method: OECD Test Guideline 416
NOAEL Parent: >750 mg/kg/bw/d
NOAEL F1: >750 mg/kg/bw/d
No adverse effects expected
Information given is based on data obtained from similar substances.

Developmental Toxicity:
Light Cycle Oil:
Species: Rat
Application Route: Dermal
Dose: 1, 50, 250 mg/kg/d
Number of exposures: once daily
Test period: GD 0-19
Method: OECD Guideline 414
NOAEL Teratogenicity: 1 mg/kg
NOAEL Maternal: 1 mg/kg

Diesel Reference Fuel U-32
Aspiration toxicity:
May be fatal if swallowed and enters airways.

CMR effects:
Light Cycle Oil:
Carcinogenicity: Possible human carcinogen

C12-C14 Isoalkanes:
Carcinogenicity: Not available
Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects. In vivo tests did not show mutagenic effects
Teratogenicity: Animal testing did not show any effects on fetal development.
Reproductive toxicity: Animal testing did not show any effects on fertility.

Further information:
Solvents may degrease the skin.

SECTION 12: Ecological information

Ecotoxicity effects
Toxicity to fish
## Diesel Reference Fuel U-32

### Toxicity to daphnia and other aquatic invertebrates

<table>
<thead>
<tr>
<th>Substance</th>
<th>LL50 Value</th>
<th>Exposure time</th>
<th>Species</th>
<th>Test Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Cycle Oil</td>
<td>&gt; 0.3 mg/l</td>
<td>96 h</td>
<td>Oncorhynchus mykiss (rainbow trout)</td>
<td>OECD Test Guideline 203</td>
</tr>
<tr>
<td>C12-C14 Isoalkanes</td>
<td>&gt; 1,000 mg/l</td>
<td>96 h</td>
<td>Oncorhynchus mykiss (rainbow trout)</td>
<td>OECD Test Guideline 203</td>
</tr>
</tbody>
</table>

Information given is based on data obtained from similar substances.

### Toxicity to algae

<table>
<thead>
<tr>
<th>Substance</th>
<th>EL50 Value</th>
<th>Exposure time</th>
<th>Species</th>
<th>Growth Inhibition Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light Cycle Oil</td>
<td>0.32 mg/l</td>
<td>48 h</td>
<td>Daphnia magna (Water flea)</td>
<td>OECD Test Guideline 202</td>
</tr>
<tr>
<td>C12-C14 Isoalkanes</td>
<td>&gt; 3,000 mg/l</td>
<td>48 h</td>
<td>Acartia tonsa (Marine Copepod)</td>
<td>ISO 14669 and PARCOM method</td>
</tr>
</tbody>
</table>

Information given is based on data obtained from similar substances.

### M-Factor

<table>
<thead>
<tr>
<th>Substance</th>
<th>M-Factor (Acute Aquat. Tox.)</th>
<th>M-Factor (Chrom. Aquat. Tox.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distillates (petroleum), light catalytic cracked</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### Toxicity to fish (Chronic toxicity)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12-C14 Isoalkanes</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Toxicity Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>C12-C14 Isoalkanes</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Biodegradability: Taking into consideration the properties of several ingredients, the product is estimated not to be readily biodegradable according to OECD classification.

Elimination information (persistence and degradability)

Bioaccumulation: The product may be accumulated in organisms.

Mobility: This product may float or sink in water.

Results of PBT assessment

Light Cycle Oil: Non-classified PBT substance, Non-classified vPvB substance

C12-C14 Isoalkanes: Non-classified PBT substance, Non-classified vPvB substance

Additional ecological information

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

Light Cycle Oil: Very toxic to aquatic life.

C12-C14 Isoalkanes: This product has no known ecotoxicological effects.

Long-term (chronic) aquatic hazard

Light Cycle Oil: Very toxic to aquatic life with long lasting effects.

C12-C14 Isoalkanes: This product has no known ecotoxicological effects.

SECTION 13: Disposal considerations

The information in this SDS pertains only to the product as shipped. Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product: The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14: Transport information

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous
Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the SDS and the bill of lading.

**US DOT (UNITED STATES DEPARTMENT OF TRANSPORTATION)**
UN1202, DIESEL FUEL, 3, III

**IMO / IMDG (INTERNATIONAL MARITIME DANGEROUS GOODS)**
UN1202, DIESEL FUEL, 3, III, (48 °C), MARINE POLLUTANT, (LIGHT CYCLE OIL)

**IATA (INTERNATIONAL AIR TRANSPORT ASSOCIATION)**
UN1202, DIESEL FUEL, 3, III

**ADR (AGREEMENT ON DANGEROUS GOODS BY ROAD (EUROPE))**
UN1202, DIESEL FUEL, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS, (LIGHT CYCLE OIL)

**RID (REGULATIONS CONCERNING THE INTERNATIONAL TRANSPORT OF DANGEROUS GOODS (EUROPE))**
UN1202, DIESEL FUEL, 3, III, ENVIRONMENTALLY HAZARDOUS, (LIGHT CYCLE OIL)

**ADN (EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY INLAND WATERWAYS)**
UN1202, DIESEL FUEL, 3, III, ENVIRONMENTALLY HAZARDOUS, (LIGHT CYCLE OIL)

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

**SECTION 15: Regulatory information**

<table>
<thead>
<tr>
<th>Notification status</th>
<th>Europe REACH</th>
<th>United States of America (USA)  TSCA</th>
<th>Switzerland CH INV</th>
<th>Canada DSL</th>
<th>Australia AICS</th>
<th>New Zealand NZIoC</th>
<th>Japan ENCS</th>
<th>Korea KECI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This mixture contains only ingredients which have been registered according to Regulation (EU) No. 1907/2006 (REACH).</td>
<td>On or in compliance with the active portion of the TSCA inventory</td>
<td>On the inventory, or in compliance with the inventory</td>
<td>All components of this product are on the Canadian DSL</td>
<td>On the inventory, or in compliance with the inventory</td>
<td>On the inventory, or in compliance with the inventory</td>
<td>A substance(s) in this product was not registered, notified to be registered, or exempted from registration by CPChem according to K-REACH regulations. Importation or manufacture of this product is still</td>
<td></td>
</tr>
</tbody>
</table>

SDS Number: 100000100096
permitted provided the Korean Importer of Record has themselves notified the substance.

Philippines PICCS : Not in compliance with the inventory
China IECSC : On the inventory, or in compliance with the inventory
Taiwan TCSI : On the inventory, or in compliance with the inventory

Other regulations : Law on the Prevention and Control of Occupational Diseases

SECTION 16: Other information

Further information
Legacy SDS Number : 664950

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information in this SDS pertains only to the product as shipped.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

### Key or legend to abbreviations and acronyms used in the safety data sheet

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>American Conference of Government Industrial Hygienists</td>
</tr>
<tr>
<td>AICS</td>
<td>Australia, Inventory of Chemical Substances</td>
</tr>
<tr>
<td>DSL</td>
<td>Canada, Domestic Substances List</td>
</tr>
<tr>
<td>NDSL</td>
<td>Canada, Non-Domestic Substances List</td>
</tr>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
</tr>
<tr>
<td>CAS</td>
<td>Chemical Abstract Service</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration</td>
</tr>
<tr>
<td>EC50</td>
<td>Effective Concentration 50%</td>
</tr>
<tr>
<td>EGEST</td>
<td>EOSCA Generic Exposure Scenario Tool</td>
</tr>
<tr>
<td>EOSCA</td>
<td>European Oilfield Specialty Chemicals Association</td>
</tr>
<tr>
<td>EINECS</td>
<td>European Inventory of Existing Chemical Substances</td>
</tr>
<tr>
<td>MAK</td>
<td>Germany Maximum Concentration Values</td>
</tr>
<tr>
<td>GHS</td>
<td>Globally Harmonized System</td>
</tr>
<tr>
<td>&gt;=</td>
<td>Greater Than or Equal To</td>
</tr>
<tr>
<td>IC50</td>
<td>Inhibition Concentration 50%</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>IECSC</td>
<td>Inventory of Existing Chemical Substances in China</td>
</tr>
<tr>
<td>ENCS</td>
<td>Japan, Inventory of Existing and</td>
</tr>
<tr>
<td>SDS Number</td>
<td>100000100096</td>
</tr>
</tbody>
</table>
## Diesel Reference Fuel U-32

**Version 1.12**  
**Revision Date 2019-08-02**

<table>
<thead>
<tr>
<th>KECl</th>
<th>Korea, Existing Chemical Inventory</th>
<th>UVCB</th>
<th>Unknown or Variable Composition, Complex Reaction Products, and Biological Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;=</td>
<td>Less Than or Equal To</td>
<td>WHMIS</td>
<td>Workplace Hazardous Materials Information System</td>
</tr>
<tr>
<td>LC50</td>
<td>Lethal Concentration 50%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SDS Number:** 100000100096