**1. PRODUCT IDENTIFICATION**

| Company: REPSOL YPF Lubricantes y Especialidades, S.A. | Commercial name: REPSOL CARTAGO CAJAS EP 75W/90 |
| Address: Glorieta del Mar Caribe N°1. 28043 Madrid | Chemical name: Lubricant oil |
| Tel# 34 913489400 | Synonyms: API GL-4 Automotive lubricant oil for gear boxes and transmissions. |
| Fax# +34 913483610 | Molecular formula: Complex mixture of hydrocarbons and additives. |
| e-mail address: FDSRCPP@repsol.com | CAS #: NP |

| EC (EINECS)#: NP | Annex I (Dir. 67/548/EEC) #: NP |

**2. HAZARDS IDENTIFICATION**

**PHYSICAL / CHEMICAL**

- Lighter than water. It can obstruct sewers and water intakes.
- Combustible.

**TOXICITY (SYMPTOMS)**

**Inhalation:** Short-term exposures to vapours and oil mists cause irritation of the respiratory tract. Long-term exposures can cause lung fibrosis preceded by broncho-pulmonary symptoms in concentrations over 5 mg/m³ (TLV).

**Ingestion/Aspiration:** Intestinal absorption is very low. Accidental intake of large amounts causes irritation of the gastrointestinal tract, nausea, vomiting and diarrhoea.

**Contact skin/eyes:** Low skin percutaneous toxicity in short-term exposures. Long-term exposures produce smarting, redness, irritation and dermatitis due to defatting of the keratyn layer. Product contact with eyes may produce irritation.

**General toxic effects:** Mild skin and respiratory tract irritation by contact with the liquid product or by vapour inhalation.

**3. COMPOSITION**

**General composition:** Additivated lubricant oil. Complex combination of saturated hydrocarbons having carbon numbers in the range of C₁₅-C₅₀. Base oil contains less than 2% PCA’s (DMSO extract according to IP346). Contains EP additives, anticorrosion agents and freezing point depressors.

<table>
<thead>
<tr>
<th>Dangerous components</th>
<th>Range %</th>
<th>Classification</th>
<th>S Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid ester amine salt</td>
<td>&lt;2.5</td>
<td>N; R51/53 Xi; R43</td>
<td>24-29-37-60-61</td>
</tr>
<tr>
<td>Alkenyl amine CAS#112-90-3 EC(EINECS)#204-015-5</td>
<td>&lt;1</td>
<td>C; R22 R34 R43 N; R50</td>
<td>S24-25-26-37-39-61</td>
</tr>
<tr>
<td>Substituted Thiodiazol CAS#93925-00-9 EC(EINECS)#300-298-5</td>
<td>&lt;0.5</td>
<td>Xi; R38 R41 R43 R52/53</td>
<td>S24-25-26-28-37-39</td>
</tr>
</tbody>
</table>
## 4. FIRST-AID MEASURES

**Inhalation:** In case of inhalation remove the victim to fresh air. Administer oxygen if necessary. Call for medical attention.

**Ingestion/Aspiration:** Do not induce vomiting. If conscious have the victim drink water. Call for medical attention.

**Contact skin/eyes:** Remove contaminated clothes. Flush the affected area with plenty of water and soap. In case of eye contact with the product, flush with plenty of water during at least 15 minutes. Call for medical attention.

**General measures:** Call for medical attention.

## 5. FIRE-FIGHTING MEASURES

**Extinguishing agents:** Foams, dry chemicals, CO₂, water spray.

**Non suitable extinguishing agents:** Water applied directly may be ineffective due to dispersion of the material.

**Combustion products:** CO₂, H₂O, CO (in defect of air), SO₂, NOₓ.

**Special measures:** Not required.

**Special hazards:** NP

**Protective equipment:** Heat-resistant suit and gloves. Self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

**Environmental precautions:** Hazard of physical fouling to coasts, soils, etc, due to low solubility and high viscosity of the oils. Avoid the material entering water intakes.

**Personal precautions:** Avoid prolonged contact with contaminated clothes or with the product and inhalation of vapours and mists.

**Cleanup methods:** Treat as an accidental oil spill or leak; Avoid dispersion of the material with mechanical barriers. Remove with physical or chemical treatment.

**Personal protection:** Suitable protective clothing, gloves and goggles should be worn during the clean up operation.
7. HANDLING AND STORAGE

Handling:

*General precautions:* Avoid prolonged contact and inhalation of mists and vapours from heated oils. During transfer avoid contact with air, use pumps and connections properly earthed to prevent generation of electrostatic charges. The contaminated air should be filtered before discharge.

*Specific conditions:* Safety goggles and gloves should be used. Do not weld or carry out any activity that could generate sparks in areas close to product storage. Do not weld in empty tanks without previous purging.

Storage:

*Temperature and decomposition products:* Carbon monoxide (toxic gas) and asphyxiants could be emitted at high temperatures by incomplete combustion.

*Dangerous reactions:* NP

*Storage conditions:* Containers properly labelled and sealed, placed in cool and well ventilated areas. Do not smoke, weld or do any work that can produce flames or sparks in storage area.

*Incompatible materials:* Strong oxidants.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Personal protection:**

*Eye protection:* Safety goggles to avoid splashes.

*Respiratory protection:* The product is slightly volatile at room temperature and does not present special risks. In presence of heated oils, wear protective masks to avoid vapour inhalation.

*Skin protection:* Gloves (polyethylene, polyvinyl chloride and neoprene; do not use neither natural nor butyl rubber)

*Other protective equipment:* Showers and eye-washers in the working area.

*General precautions:* Avoid prolonged contact and inhalation of mists and vapours from heated oils. Local exhaust ventilation should be installed to capture and remove emissions near to the point of generation.

*Specific hygiene measures:* Contaminated footwear should be discarded. Contaminated clothing should not be taken home for laundering. Regular changing of underwear is also important if penetration of outer clothing occurs. Disposable wipes should be used. Washing/Showering facilities with a non-solvent based skin cleaner, hot water and soap must be provided and used. Use skin reconditioning cream after work.

*Exposure controls:* TLV/TWA (ACGIH) = 5 mg/m3 (oil mist)

UK.OEL-TWA(COSHH):5mg/m3; OEL- STEL:10mg/m3 [Oil mist]

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**Rev.:** 1.1  **Date:** November 27th 2009  **Doc:** 33/0763/41.40
### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Oily liquid.</td>
</tr>
<tr>
<td>pH</td>
<td>NP</td>
</tr>
<tr>
<td>Colour:</td>
<td>ASTM D-1500: 2.5</td>
</tr>
<tr>
<td>Odour:</td>
<td>Lube oil</td>
</tr>
<tr>
<td>Boiling point:</td>
<td>&gt; 400°C (ASTM D-1160)</td>
</tr>
<tr>
<td>Melting/Freezing point</td>
<td>-40°C max. (ASTM D-97)</td>
</tr>
<tr>
<td>Flash point:</td>
<td>190 °C min. (ASTM D-92)</td>
</tr>
<tr>
<td>Autoignition temperature:</td>
<td>NP</td>
</tr>
<tr>
<td>Explosive properties:</td>
<td>NP</td>
</tr>
<tr>
<td>Oxidizing properties:</td>
<td>NP</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>&lt;0.1 mmHg at 25°C</td>
</tr>
<tr>
<td>Density:</td>
<td>0.884 g/cm³ typical at 15°C</td>
</tr>
<tr>
<td>Surface tension:</td>
<td>NP</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>(100°C) 14.2 cSt typical</td>
</tr>
<tr>
<td>(40°C) 85 cSt typical</td>
<td></td>
</tr>
<tr>
<td>Vapour density:</td>
<td>NP</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>(n-octanol/water): NP</td>
</tr>
<tr>
<td>Water solubility:</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Organic solvents.</td>
</tr>
<tr>
<td>Other data:</td>
<td>Fire point: 185°C min. (ASTM D-92)</td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

| Stability               | Stable at room temperature.         |
|                        |                                     |
| Conditions to avoid:   | Exposure to open flames.            |
| Materials to avoid:    | Strong oxidants react with oils and organic materials. |
| Hazardous decomposition/combustion products: | Carbon monoxide (toxic gas) and asphyxiants could be emitted at high temperatures by incomplete combustion. |
| Polymerization risk:   | NP                                   |
| Conditions to avoid:   | NP                                   |

### 11. TOXICOLOGICAL INFORMATION

| Routes of exposure:   | Contact with skin, eyes and inhalation. Ingestion is not frequent. |
| Acute and chronic effects: | Non malignant acute effects are known. Irritation by contact with liquid and prolonged inhalation of vapour or oil mists is the most common effect. |
| Carcinogenicity:      | Base oil: IARC classification: Group 3 (The agent is not classifiable as to its carcinogenicity to humans) |
| Reproductive toxicity:| No evidences. |
| Medical conditions which increase hazard to exposure: | Respiratory tract deficiencies and dermatological problems. |

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12. ECOLOGICAL INFORMATION

Pollutant potential:

*Persistence and degradability:* The material is oily and viscous and floats on water. It presents a high physical fouling potential, mainly in sea-spills; by contact destroys small aquatic organisms and makes living difficult for upper organisms, not allowing the sunlight to reach underlying marine ecosystems, affecting its normal development. It is not readily biodegradable.

*Mobility/bioaccumulative potential:* There are no data to indicate that the product is significantly bioaccumulated by aquatic organisms or incidence in the trophic food chain, although it may cause long-term adverse effects in the aquatic environment, due to its high physical fouling potential.

*Ecotoxicological effects:* LL50 (Lethal loading)>1,000 mg/l (lubricant base oils). Dangerous for aquatic life in high concentrations (spillages).

13. DISPOSAL CONSIDERATIONS

**Disposal methods (surplus):** Recycling and recovery of base oils when possible.

**Waste:** Liquids and solids from industrial process; do not attempt to clean containers since residue is difficult to remove; dispose in a safe way.

*Disposal:* Only in specific prepared and controlled areas. Avoid releasing waste oils to sewers because they can destroy water treatment plant microorganisms.

*Handling:* Labelled and sealed containers. Avoid direct contact with waste oils.

*Provisions:* Companies which recover, dispose, store, transport or handle waste should comply with Dir. 2008/98/EC on waste, or other local, national or community provisions.

14. TRANSPORT INFORMATION

**Special precautions:** Stable at room temperature and during transport. Store in cool well ventilated areas.

**Additional information:**

- **UN Number:** NP
- **ADR/RID:** Not classified
- **Hazard identification number:** NP
- **IATA-DGR:** Not classified
- **Proper shipping name:** NP
- **IMDG:** Not classified

15. REGULATORY INFORMATION

**CLASSIFICATION**

NP

**LABELLING**

Symbols: NP

**Phrases R**

NP

**Phrases S**

Contains Alkenyl amine, Phosphoric acid ester amine salt and Substituted Thiodiazol. May produce an allergic reaction.

**Other regulations:** NP
### Data Bases consulted
- EINECS: European Inventory of Existing Commercial Substances.
- TSCA: Toxic Substances Control Act, US Environmental Protection Agency
- RTECS: US Dept. of Health & Human Services

### R phrases/Hazard Class-and-Category shown in the document:
- **R22**: Harmful if swallowed.
- **R34**: Causes burns.
- **R38**: Irritating to skin.
- **R41**: Risk of serious damage to eyes.
- **R43**: May cause sensitisation by skin contact
- **R50**: Very toxic to aquatic organisms.
- **R53**: May cause long-term adverse effects in the aquatic environment.
- **R51/53**: Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
- **R52/53**: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Legislation consulted
- Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
- Dir. 67/548/EEC about classification, labelling and packaging of dangerous substances (including amendments and adaptations in force).
- Dir. 1999/45/EC about classification, labelling and packaging of dangerous preparations (including amendments and adaptations in force).
- Dir. 91/689/EEC dangerous waste; Dir. 2008/98/EG waste management.
- Royal Decree 363/95: Regulation about notification of new substances and classification, packaging and labelling of dangerous substances.
- Royal Decree 255/2003: Regulation about classification, packaging and labelling of dangerous preparations.
- European Agreement concerning the international carriage of dangerous goods by road (ADR).
- Regulation on the international transport of dangerous goods on the railway. (RID)
- International maritime code of dangerous goods. (IMDG)
- International Air Transport Association (IATA) regulation pertaining to air shipment.

### Glossary
- **CAS**: Chemical Abstract Service
- **IARC**: International Agency for Research on Cancer
- **ACGIH**: American Conference of Governmental Industrial Hygienists.
- **TLV**: Threshold Limit Value
- **TWA**: Time Weighted Average
- **STEL**: Short-term Exposure Level
- **REL**: Recommendable Exposure Limit
- **PEL**: Permissible Exposure Limit
- **INSHT**: Instituto Nacional de Seguridad e Higiene en el Trabajo
- **VLA-ED**: Valor Límite Ambiental – Exposición Diaria
- **VLA-EC**: Valor Límite Ambiental – Exposición Corta
- **LD$_{50}$**: Lethal Dose Medium
- **LC$_{50}$**: Lethal Concentration Medium
- **EC$_{50}$**: Effective Concentration Medium
- **IC$_{50}$**: Inhibitory Concentration Medium
- **BOD**: Biological Oxygen Demand.
- **NP**: Not Pertinent
- **|**: Changes from the last revision

The information given in this document has been compiled based on the best existing information sources, latest available knowledge and according to the current requirements on classification, packaging and labelling of hazardous substances. It does not imply the information is exhaustive or accurate in all cases. It is the user’s responsibility to determine the validity of the information contained in this Material Safety Data Sheet to apply depending on the case.