



# Material Safety Data Sheet

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| Issued:  | 21 09 2004 |
| Revised: | 14 06 2008 |
| Rev No.: | 5          |
| Product: | LFO3       |

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| <b>COMPANY DETAILS:</b>   |   |  |
| FFS Refiners (Pty) Ltd.<br>104 Umhlatuzana Road<br>Sea View, Durban 4094<br>SOUTH AFRICA  |   | Ph: 031 459 5300<br>Fax: 031 459 5326<br>Email: ffs@ffs.co.za  |
| <b>1) PRODUCT DETAILS:</b>  |   |  |
| Product name:   | Light Fuel Oil 3  |  |
| Chemical nature:  | Liquid Hydrocarbons (C12 to C32)  |  |
| Synonyms:   | LFO 3   |  |
| UN no./ SIN:  | 1268  |  |
| <b>2) COMPOSITION</b>   |   |  |
| Complex blend of liquid hydrocarbons consisting of iso- and normal paraffins, olefins, naphthalenes and aromatics of the C12 to C32 carbon range. Up to 3,5% sulphur content.   |   |  |
| <b>Dangerous Substances</b>   | <b>% (m/m)</b>  | <b>Risk Phrase</b>   |
| Aromatics   | > 50%   | Carcinogen   |
| <b>3) HAZARDS IDENTIFICATION</b>  |   |  |
| Inflammable liquid (flashpoint approx 100°C); may be fatal if inhaled; harmful if swallowed or if absorbed through skin; contains probable carcinogen compounds.  |   |  |
| <b>4) FIRST AID MEASURES</b>  |   |  |
|   | <b>Symptom and Effect</b>   | <b>First Aid</b>   |
| Skin  | Prolonged and repeated contact with skin may cause severe irritation; Toxic if absorbed through the skin; potentially carcinogenic  | Wash with soap and water until no odour remains.   |
| Eyes  | Contact with eyes may cause redness, tearing, blurred vision and moderate irritation.   | Flush eyes with clean water for 15 minutes. Seek medical advice if irritation persists.  |
| Ingestion   | Harmful or fatal if swallowed. Ingestion of this product may cause central nervous system effects.  | If victim is alert, give large amounts of water to drink and seek medical advice. Small amounts can be washed from mouth until no taste remains. |
| Inhalation  | Excessive exposure may cause respiratory tract irritation. Repeated prolonged exposure to high concentrations may lead to central nervous system effects, headaches, dizziness and loss of co-ordination. | Immediately remove to fresh air. Give oxygen if required. Seek medical advice if required.   |
| <b>5) FIRE FIGHTING MEASURES</b>  |   |  |
| SMALL FIRES: Use CO <sub>2</sub> , foam or dry chemical.  |   |  |
| LARGE FIRES: Use CO <sub>2</sub> , fluoro protein foam or dry chemicals to extinguish the fire. Use water to cool fire-exposed containers/ structures and to protect personnel. Combustion may release toxic chemicals; utilise respirators; avoid low lying areas. |   |  |



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| <b>6) ACCIDENTAL RELEASE MEASURES</b>  |   |
| Full protective clothing, rubber gloves (PVC, Neoprene, Nitrile, or Viton), gumboots and respirator to be worn. Shut off leaks. Remove all sources of heat or flame. Control spill by use of booms, sand, sawdust or any other suitable available medium. Recover as much free product as possible using pumps or mechanical means. Absorb residue with sawdust, sand or other absorbent material. Avoid the product entering storm water drains or waterways. |   |
| <b>7) HANDLING AND STORAGE</b>   |   |
| <b>Handling:</b> Full protective clothing should be worn when handling the product. A high standard of personal hygiene is essential. Application of protective hand creams may be beneficial.   |   |
| <b>Handling temperature:</b> Avoid extreme temperatures  |   |
| <b>Storage:</b> Store away from strong oxidisers. Incompatible with sulphuric acid, nitric acid, caustics, aliphatic amines and amides.  |   |
| <b>Storage Conditions:</b> Storage conditions should comply with SANS Code 10131:2004 and SANS Code 10089:2003. Product should be stored in a well ventilated area. Sparks, flames and other sources of ignition near the product should be avoided. Do not eat, drink or smoke in storage area.   |   |
| <b>8) EXPOSURE CONTROLS/ PERSONAL PROTECTION</b>   |   |
| Occupational Exposure Limits:  | OHSA 16 mg/m <sup>3</sup> TWA OEL-CL  |
| Controls:  | Store in accordance with SANS Code 10131:2004 or SANS Code 10089:2003   |
| Personal Protection:   | Ensure adequate tank ventilation<br>If engineering controls and work practices are not effective in controlling this material, then wear suitable personal protection equipment including overalls, impervious gloves, respirators, safety goggles, safety boots or gumboots. |
| <b>9) PHYSICAL AND CHEMICAL PROPERTIES</b>   |   |
| High Aromatic Light Oil with characteristic odour. Low solubility in water.<br>Density @ 40°C, kg/l: 0.95<br>Flashpoint @ 101, 325 kPa: > 60°C<br>Boiling Point: approximately 185°C<br>Viscosity (cSt): 4 - 8 @ 50°C  |   |
| <b>10) STABILITY AND REACTIVITY</b>  |   |
| Partially volatile at temperatures in excess of 60°C; avoid strong oxidisers. Incompatible with sulphuric acid, nitric acid, caustics, aliphatic amines and amides.  |   |
| <b>11) TOXICOLOGICAL INFORMATION</b>   |   |
| Some components of the product are suspected carcinogens. Potentially harmful effects to liver, kidneys, heart, lungs and nervous system may result from chronic over exposure. Some of the components of the product have been associated with immunological, reproductive, fetotoxic and genotoxic effects.  |   |



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## 12) ECOLOGICAL INFORMATION

No ecological problems are expected if the product is handled and used with due care. When released to the environment, some evaporation and bio-degradation will occur. Some components of the product are soluble in water and may contaminate groundwater reserves. Some components of the product will persist in soil. Material is moderately toxic to aquatic organisms.

## 13) DISPOSAL CONSIDERATIONS

Do not flush to drain/ storm sewer. Product must be disposed of to an approved hazardous waste disposal site or an approved incinerator.

## 14) TRANSPORT INFORMATION

|                   |                    |
|-------------------|--------------------|
| UN no./ SIN       | 1268               |
| ICS:              | Class 3: Group III |
| IMDG Code:        | Class 3            |
| Marine Pollutant: | Yes                |

## 15) REGULATORY INFORMATION

|                      |   |
|----------------------|---|
| National Legislation | National Road Traffic Act 93 of 1996<br>Hazardous Substances Act 15 of 1973<br>Occupational Health and Safety Act 85 of 1993<br>Hazardous Chemical Substances Regulation GNR 1179 |
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## 16) OTHER INFORMATION

For more information please contact FFS Refiners' Customer Services Department on (031) 459 5300

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