

SHELL FURNACE OILS
Material Safety Data Sheet

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 Date of Issue: 24 June 1997
 Amended: 17 October 2005
 Reviewed: 17 October 2005

STATEMENT OF HAZARDOUS NATURE Shell Furnace Oils are classed as a hazardous substance under the criteria of Hazardous Substance Regulations (2001).

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 Wellington

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IDENTIFICATION

Product Name	Shell Brand Name and Grade SHELL FURNACE OIL LIGHT SHELL FURNACE OIL HEAVY	Code 54721 55726
Other Names	Shell Marine Fuel Oil Light; Marine Fuel Oil 40 cSt; LFO Shell Marine Fuel Oil Heavy; Marine Fuel Oil 180 cSt; Heavy Furnace Oil; Thin Fuel Oil 180; Fuel Oil Heavy; Bunker C; HFO	
Uses	Oil fired boiler fuel.	
U.N. Number	n/ap	
Hazardous Substance Cl,	n/ap	
Dangerous Goods Class	n/ap	
Hazchem Code	n/ap	
Packaging Group	n/ap	
Shipping Name	n/ap	

PHYSICAL DESCRIPTION / PROPERTIES

CHARACTERISTIC	UOM	
Appearance and Odour		Black liquid, hydrocarbon odour.
Chemical Reactivity		Stable. reacts with oxidising agents.
Specific Gravity,	kg/L @ 15°C	0.905 to 0.950
Boiling Point,	°C	>300
Vapour Pressure	mmHg @ 20 °C	<7
Vapour Density	Air = 1	>1
Evaporation Rate,		n/av
Solubility [water]		negligible
Flash Point	°C, closed cup	LFO: 77; HFO: 112.
Autoignition	°C,	n/av
Flammability Limits	% v/v in air	LEL 0.5 UEL 5.0

INGREDIENTS

Complex mixture of hydrocarbons

Cas No

**Proportion;
%m/m**

100

HEALTH HAZARD INFORMATION

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HEALTH EFFECTS

- SWALLOWED** Moderately toxic. Product tends to break up into a foam if the patient vomits. Upon aspiration into the lungs, chemical pneumonitis may develop. May cause diarrhoea, nausea, vomiting and abdominal pain if swallowed.
- SKIN** Mildly irritating to skin. May cause dermatitis due to defatting effect, if in contact with skin.
Where long and regular physical contact with these oils is to occur, expert* medical advice should be sought as to the need for periodic skin examination and employees are instructed to seek medical advice in the case of any skin abnormality. (* Refer to note (i) in 'Special Notes'.)
- EYE** Mildly irritating to eyes.
- INHALED** Not a hazard at ambient temperature due to low vapour pressure. Vapours (generated at elevated temperatures) or spray mists are toxic. Irritating to respiratory system. May cause nausea, headache and dizziness.
NOTE: Below 40°C the vapour pressure is too low to cause any health hazard. High concentrations will build up in poorly ventilated areas and at higher temperatures.

FIRST AID

- SWALLOWED** If swallowed, do NOT induce vomiting. Give milk or water to drink. The main hazard following accidental ingestion is aspiration of the liquid into the lungs, to which children are more susceptible than adults.
SEND TO THE HOSPITAL IMMEDIATELY.
- EYE** Flood with water for at least 15 minutes, blinking as often as possible. Do not force the eye lid open.
If irritation persists, obtain medical attention.
- SKIN** For gross contamination: Drench contaminated area with water and remove contaminated clothing.
Wash with soap and water. Launder contaminated clothing before reuse.
Obtain medical attention for any persistent skin irritation or abnormality.
- INHALED** Move victim to fresh air.
Keep the patient warm and at rest.
If unconscious, place in recovery position.
If not breathing, apply artificial respiration.
Give cardiac massage if necessary
SEND TO HOSPITAL.

ADVICE TO DOCTOR

Observe and treat symptomatically. In general, emesis induction is unnecessary with high viscosity, low volatility products, ie: most oils and greases.

PRECAUTIONS FOR USE

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EXPOSURE STANDARDS

Threshold Limit Value (TLV) - mineral oil mist - 5 mg/m³ TWA ACGIH.
Workplace Exposure Standard (WES) - mineral oil mist - 5mg/m³ TWA.

ENGINEERING CONTROLS

Below 40 deg C fuel oils exhibit a vapour pressure that is too low to cause any health hazard. However, in poorly ventilated areas, and at higher temperatures, vapour concentrations may be sufficiently high to become hazardous.

Special ventilation is not normally required due to the low volatility of the product at normal temperatures. At higher than ambient temperatures, or in the operation of certain equipment, mist or vapour may be generated and additional ventilation should be provided to keep air levels low.

Where necessary:- Provide explosion proof ventilation system. Maintain adequate ventilation.

In confined spaces, air supplied equipment complying with NZS/AS1716-1991 "Respiratory Protective Devices" should be used.

PERSONAL PROTECTION

Since we cannot anticipate or control the many different conditions under which this information and our products may be used, each user should review these recommendations in the specific context of the intended application and follow where appropriate.

For normal use:-

Avoid contact with the skin and eyes and avoid breathing vapours, fumes or spray mists. If skin contact occurs, wash thoroughly.

Where liquid is liable or likely to come into contact with the person irrespective of spray mists or vapour levels in the area, the following equipment should be included in the previous precautions:

- (1) Goggles or face shield.
- (2) PVC gloves.
- (3) Cotton overalls or PVC apron and sleeves, or full PVC covering.
- (4) PVC boots.

Where high contaminant spray mist or vapour levels exist ie: approaching the TLV, or are expected to arise the following additional equipment is recommended: -

- (1) For short elevated exposures, eg spillages:- Appropriate organic cartridge respirator complying with NZS/A51716 "Respiratory Protective Devices". Ensure working life of cartridge is not exceeded. NB. If vapour levels exceed the TLV by more than ten times, air supplied apparatus should be used.
- (2) For prolonged exposures and confined spaces: - Full face air supplied or self contained breathing apparatus. Refer to NZS/A51715 and 1716 for selection and use of correct type. NOTE: NZS/AS 1715-1991 (Selection, Use and Maintenance of Respiratory Protective Devices) and NZS/AS 1716-1991 (Respiratory Protective Devices) should be read in conjunction with each other.

Observe good personal hygiene - 'wash hands thoroughly with soap or hand cleanser before eating, drinking or smoking and before using the toilet. No significant skin contact including that from clothing contamination should be allowed. If contamination occurs, change clothing. Clothing wet with product should be soaked with water before removing to prevent the possibility of ignition by static electricity discharges.

FLAMMABILITY

Combustible liquid. Isolate from sources of heat, naked flames or sparks. Take precautions against static electricity discharges. Earth and bond all process equipment including tanks and drums. Heat or fine atomization can cause a flammable air/vapour mixture to form. Ensure adequate ventilation.

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Ensure equipment and fittings are flame proofed. See Safe Handling Information - Fire/Explosion Hazard.

SAFE HANDLING INFORMATION

STORAGE AND TRANSPORT

Stable under normal conditions. Store in a cool place. Store container in well ventilated place. Store away from heat, naked flames or sparks. Store away from strong oxidizing agents. Keep containers closed at all times. Keep away from food, foodstuffs, drink or clothing. Take precautions against static electricity discharges.

This product is not a hazardous substance as defined in NZS5433:1999, Transport of Dangerous Goods on land.

SPILLS AND DISPOSAL

GENERAL: Extinguish or remove all sources of ignition. Clear area of all unprotected personnel. Wear appropriate protection equipment. Shut off source of leak if safe to do so. Dike and contain spill with sand or earth.. Allow to evaporate if conditions permit.

MINOR: Absorb the liquid with sand, earth or other absorbent.

MAJOR: Pump up excess liquid and absorb residue with sand, earth or other absorbent. On large storage sites fitted with interceptors the product may be washed into the interceptor with a fine water spray. Clean contaminated area with water and detergent.

WASTE MATERIAL DISPOSAL:- Dispose of used absorbent in an approved landfill or municipal tip in accordance with local regulations. Keep away from heat, naked flame or sparks. Do not flush to drains or sewers. Do not contaminate streams, rivers or water courses. Inform local authority if liquid enters drains, sewers, streams, etc.

FIRE / EXPLOSION HAZARD

Combustible liquid. Explosive air-vapour mixture may form. Explosive when mixed with oxidising substances. Earth and bond all transfer equipment including tanks and drums. Keep away from heat, naked flames or sparks. Keep away from oxidizing agents. Have adequate fire equipment available.

Evacuate personnel and remove fire sources to distances beyond those at which the gas detector indicates a gas concentration less than 5% of the lower explosion limit (LEL). Advise Fire Brigade of nature of hazard.

Keep pipelines, containers, etc. cool with water spray. Foam, Carbon Dioxide or Dry Chemical extinguishers required. For large fires use foam. Avoid applying water directly onto product unless using an approved fog nozzle. Do not use more water than is necessary. Contain runoff.

In smoke or fumes wear self contained breathing apparatus. Carbon Monoxide and unidentifiable organic compounds may be formed during combustion.

REGULATORY INFORMATION

This product is classified as a 3.1D – Flammable liquid; Low Hazard, according to the Hazardous Substances (Classification) Regulation 2001.

This product is classified as a 6.3B– Substance that is mildly irritating to the skin, according to the Hazardous Substances (Classification) Regulation 2001.

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This product is classified as a 6.7B – Substance that is a suspected human carcinogen, according to the Hazardous Substances (Classification) Regulation 2001.

This product is classified as a 9.1C – Substance that is harmful in the aquatic environment, according to the Hazardous Substances (Classification) Regulation 2001.

OTHER INFORMATION

SPECIAL NOTES

(i) Refer to the Vocational Register of Dermatologists; published by the Medical Council of New Zealand. Telephone 04-384 7635

(ii) In dry-cleaning oil contaminated clothing it is important that the machine is not overloaded and that freshly distilled solvent is used for each batch, also that clothing is given a final rinse in clean solvent. If filtered, rather than distilled solvent is used or the rinse is omitted, oil will be left in the clothing.

CONTACT POINT

Shell New Zealand Customer Service Centre
0800 474 355