



**Jordan Petroleum Refinery Company LTD.
Safety and Environment Department**

Material Safety Datasheet: Fuel oil

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY

Product name : Fuel oil
MSDS Number : PR-06
Company : Jordan Petroleum Refinery Company LTD.
Amman – Jordan.
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SECTION 2: HAZARDS IDENTIFICATION.

Warning Statement : Possible risk of irreversible effects following prolonged and repeated skin exposure.
May enter lungs and cause damage if swallowed.
May cause irritation to eyes and respiratory tract.
May cause cancer.
Hydrogen sulphide may be released when heated.
Harmful to the aquatic environment.

Potential Health Effects : **Ingestion:** If swallowed, abdominal discomfort, nausea and diarrhea may occur. Aspiration may occur during swallowing or vomiting, resulting in lung damage.
Eye contact: May cause irritation, experienced as mild discomfort and seen as slight excess redness of the eye.
Skin contact: Causes severe irritation with pain, severe excess redness and swelling with chemical burns, blister formation and possible tissue destruction.
Inhalation: Vapors or mist may cause irritation of the nose and throat, headache, nausea, vomiting, dizziness, drowsiness, euphoria, loss of coordination and disorientation. In poorly ventilated areas or confined spaces, unconsciousness and asphyxiation may result. Inhalation of vapors or mist may result in the absorption of potentially harmful amounts of material.

Prolonged or widespread skin contact may result in the absorption of potentially harmful amounts of material.



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SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS.

Substance/Mixture : Blended fuel oil

Composition :
information

Components name	Conc. (%)	CAS No.
Heavy Fuel Oil	≤ 100,00	68476-33-5

Additional Information: Contains hydrogen sulphide, Hydrogen sulphide may be present both in the liquid and the vapor. Composition is complex and varies with the source of the crude oil. Residues and their blends with distillates can be used as heavy fuel oils and need to be heated for use.

SECTION 4: FIRST AID MEASURES.

- Eye contact : : Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart while flushing to rinse entire surface of eye and lids with water. Get medical attention.
- Skin contact : : Wash skin with plenty of soap and water until all traces of material are removed. Remove and clean contaminated clothing and shoes. Get medical attention if skin irritation persists or skin contact has been prolonged.
- Inhalation : : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, qualified personnel may administer oxygen. Get immediate medical attention.
- Ingestion : : Do not induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed Potential acute health effects :

- Eye : : May cause irritation, experienced as mild discomfort and seen as slight excess redness of the eye.
- Skin : : Causes severe irritation with pain, severe excess redness and swelling with chemical burns, blister formation and possible tissue destruction.
- Inhalation : : Vapors or mist may cause irritation of the nose and throat, headache, nausea, vomiting, dizziness, drowsiness, euphoria, loss of coordination and disorientation. In poorly ventilated areas or confined spaces, unconsciousness and asphyxiation may result. Inhalation of vapors or mist may result in the absorption of potentially harmful amounts of material.
- Ingestion : : If swallowed, abdominal discomfort, nausea and diarrhea may occur. Aspiration may occur during swallowing or vomiting, resulting in lung damage.



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Other remarks : Prolonged or widespread skin contact may result in the absorption of potentially harmful amounts of material.

SECTION 5. FIRE-FIGHTING MEASURES

Form: : Liquid

Flash Point: : Min. 60 °C

Suitable extinguishing media : Use dry powder, foam or carbon dioxide. Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water fog to disperse the vapors and to provide protection for personnel attempting to stop leak.

Special Protective equipment For firefighters : The nature of special protective equipment required will depend upon the size of the fire, the degree of confinement and the natural ventilation available. Fire-resistant clothing contained breathing apparatus is recommended fires in confined spaces and poorly ventilated areas. Full fire-proof recommended for any large fires involving this product. In case of fire always, call the fire brigade. Small fires, such as those capable of being fought with a hand held extinguisher, can normally be fought by a person who has received instruction on the hazards of flammable liquid fires.

Extinguishing media to avoid: : Water jet

SECTION 6. ACCIDENTAL RELEASE MEASURES

Procedures in case of accidental release or leakage : Ventilate area. Avoid breathing vapor. Use self-contained breathing apparatus, supplied air mask for large spills, or confined areas. Contain spill if possible. Wipe up or absorb on suitable material and shovel up. Prevent entry into sewers and waterways. Avoid contact with skin, eyes or clothing.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling : Eliminate all sources of ignition. Take precautionary measures against static discharges. Unloading gases: Avoid inhalation of vapors (Hydrogen sulphide (H₂S), Hydrocarbons. Provide adequate ventilation. Oil mist: Avoid inhalation of vapors and contact with skin and eyes. Use



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personal protective equipment and/or local ventilation when needed. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Product is usually handled heated. Handling and storage temperature must not exceed the flash point. If there is a risk of contact with hot product, all protective equipment worn should be suitable for use with high temperatures. During tank operations follow special instructions (risk of oxygen displacement, hydrogen sulfide and hydrocarbons).

Precautions for safe storage : Flammable liquid storage. Can be stored heated. Store in a demarcated bonded area to prevent release to drains and/or watercourses. Change contaminated thermal insulation material (auto-ignition hazard). Store away from the following materials: Oxidizing agents. Use containers made of the following materials: Carbon steel. Stainless steel.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Individual protection measures :

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask ,Full face mask, Filter type: ABEK / P (EN 141) The filter class must be suitable for the maximum contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

Eye protection : Use suitable eye protection.

Skin Protection : Protective clothing such as uniforms, coveralls or lab coats should be worn. Launder and dry-clean when soiled. Gloves and boots resistant to chemicals and petroleum distillates required.

SECTION 8. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Brown to black. Viscous liquid.
Odor	:	Hydrocarbon.
Flash point	:	Min. 60 °C (ASTM D-93 / PMCC)
Upper / lower Flammability or Explosive limits	:	Typical 0,50 - 5,00 % (V)
Auto-ignition temperature	:	> 220 °C / 428 °F
Density	:	< 1 g/cm ³ at 15 °C



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Water solubility	:	Insoluble
Kinematic viscosity	:	≤ 380 cSt. @ 50 °C
Total Sulfur	:	≤ 1.0 Mass%
Water Content	:	≤ 1.0 vol.%
Pour Point	:	≤ 15 °C

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Combustible
Stability	:	The product is stable under storage at normal ambient temperatures.
Possibility of hazardous reactions	:	None under normal processing.
Conditions to avoid	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Incompatible materials	:	Oxidizing substances
Hazardous decomposition products	:	Burning produces noxious and toxic fumes.

SECTION 11. TOXICOLOGICAL INFORMANTION

Fuel oil, residual, Heavy Fuel oil (68476-33-5)

LD50/oral/rat	> 2000 mg/kg
LD50/dermal/rat	> 2000 mg/kg

SECTION 12. ECOLOGICAL INFORMATION

Mobility	:	Residue fuel oil will absorb to soil particles.
Persistence and Degradability	:	Physico-chemical data indicate that residue fuel oil components may persist in the aquatic environment.
Potential to Bio-accumulate	:	This product is expected to bio-accumulate.
Aquatic toxicity	:	Some short term toxicity to aquatic and marine organisms.
Remarks	:	This product, due to its density, can either



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float, skin or form emulsions is spilled on to water depending on the environmental conditions

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal of waste material must be conducted in accordance with ministry of environment regulations.

SECTION 14. REGULATORY INFORMATION

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006 :

-“3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008 : Fuel oil, residual, Heavy Fuel oil”

-“28. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Carcinogen category 1A or 1B (Table 3.1) or Carcinogen category 1 or 2 (Table 3.2) and listed as follows: Carcinogen category 1A (Table 3.1)/Carcinogen category 1 (Table 3.2) listed in Appendix 1 Carcinogen category 1B (Table 3.1)/Carcinogen category 2 (Table 3.2) listed in Appendix 2 : Fuel oil, residual, Heavy Fuel oil”

SECTION 15. TRANSPORTATION INFORMATION

This product is transported according to related Jordanian laws and legislations.

SECTION 16. OTHER INFORMATION

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 guidance for safe handling, use, processing, storage, 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.

Prepared by : Safety and Environment Department
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