

Material Safety Data Sheet

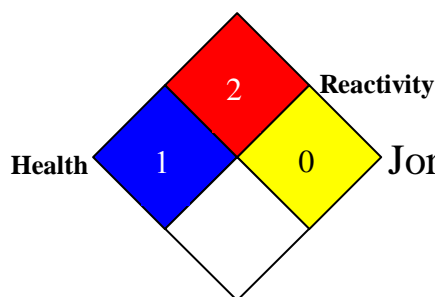
Fuel Oil

NFPA: Flammability



JPRC PR-06

HMIS III:



Jordan Petroleum Refinery Company

Health	1
Flammability	2
Reactivity	0

Specific Hazard

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Fuel Oil
MSDS Number : JPRC PR-6.
Product Use Description : Fuel, intermediate stream
Company : Jordan Petroleum Refinery
Amman – Jordan.
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Chemical Description : Blended fuel oil

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS.

Components	Proportion (%)	CAS No.	EC No.
Heavy Fuel Oil	96.5 - 96	68476-33-5	269-822-7
Total Sulfur	3.5- 4		

SECTION 3. 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.
 - 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. Believed not to be a skin sensitizer.
- 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.
- Medical conditions Aggravated by exposure : Because of its irritating properties, repeated skin contact may aggravate any existing dermatitis (skin condition).
- Other remarks : Prolonged or widespread skin contact may result in the absorption of potentially harmful amounts of material.
- Effects of exposure to the environment : Some short term toxicity to aquatic and marine organisms.

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.
- Ingestion : Do not induce vomiting. Get medical attention. Never give anything by mouth to an unconscious or convulsing

Inhalation :	person. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, qualified personnel may administer oxygen. Get immediate medical attention. External cardiac massage may be instituted if the heart has stopped.
Other recommendations :	Aspiration of this product during induced vomiting can result in lung injury, which may be fatal. If evacuation of stomach contents is considered necessary, use Method least likely to cause aspiration, gastric lavage after end tracheal Intubation. Remove and dry clean or launder clothing soaked or soiled with This material before reuse. Dry cleaning of contaminated clothing may be more effective than normal laundering. Inform individuals responsible for cleaning of potential hazards associated with handling contaminated clothing.

SECTION 5. FIRE-FIGHTING MEASURES

Form :	Liquid
Flash Point :	92 °C Max 15
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 fire -fighters :	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 which Must not be used for safe Reasons :	Water jet
Special exposure hazards from the substance Or preparation itself, Combustion products or Resulting gases :	Hydrogen sulfide (H ₂ S) may be released when heated.

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

Handling : Local exhaust ventilation recommended if generating vapor, dust or mist. If exhaust ventilation is not available or is inadequate, use approved respirator as appropriate. This product may contain volatile hydrocarbons, which may accumulate in the container headspace, thereby creating a flammable or explosive atmosphere

Storage : Transport, handle and store in accordance with applicable local regulations and only in labeled containers designed for this product. Ground and bond shipping container, transfer line and receiving container if there is a chance that the tank has previously contained a low flash material. Keep away from sparks, flame and other sources of ignition. Protect containers against static electricity, lightning and physical damage.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye protection : Chemical type goggles or face shield recommended to prevent eye contact

Hand and 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.

Respiratory Protection : Airborne concentrations should be kept lowest levels possible. If vapor, mist or dust is generated, use approved respirator as appropriate. Supplied air respiratory protection should be used for cleaning large spills or entry into tanks, vessels or other confined spaces. O₂ levels should be at least 20% in confined spaces or work areas.

Exposure limit for the product : None established for this product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form :	Liquid
Appearance :	Dark brown semi solid
Odor :	Petroleum odor
Flash point (° C) :	Min : 66
Sulfur content (%m/m)	Max : 4
Water content %	Max : 1
Ash content % :	Max : 0.15
Carbon residue micro (%m/m):	Max : 22
Kinematic Viscosity @ 100° C:	Max : 56 mm ² /s
Total sediment: %	Max : 0.15
Strong acid number :	Max : 0

SECTION 10. STABILITY AND REACTIVITY

Conditions to Avoid :	Sources of ignition such as naked flames, sparks, hot surfaces.
Materials to Avoid :	Avoid contact with strong oxidizing agents.
Hazardous decomposition Products :	Carbon monoxide, carbon dioxide, and aldehydes ketones. Hydrogen sulphide (H ₂ S) sulphide (H ₂ S) may be accumulated in confined spaces.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute

Skin contact :	Slightly irritating to the skin. Believed not to be a skin sensitizer.
Eye contact :	Slightly irritating to eyes.

Inhalation :	Likely to be irritating to the respiratory tract if high concentrations of mists or vapor are inhaled. May cause nausea, dizziness, headaches and drowsiness if high concentrations of vapor are inhaled. May be toxic when hydrogen sulphide is present in the vapor.
Ingestion :	Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhea. Will injure the lungs if aspiration occurs, e.g. during vomiting.
Chronic :	This product, or a component of this product, has caused skin cancer when repeatedly applied to the skin of laboratory animals without any effort to remove materials between applications

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

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal :	Dispose in a safe manner in accordance with local / national regulations.
Remarks :	None.

SECTION 14. TRANSPORT INFORMATION

Not dangerous for conveyance under UN, IMO, ADR /RID and IATA / ICAO codes.

SECTION 15. REGULATORY INFORMATION

Labeling information

Indication of danger

Xn Harmfu

Risk phrases :

Harmful to aquatic organisms, may cause long term adverse effects in the aquatic

Environment

Safety phrases S36/37

Wear suitable protective clothing.

Wear suitable gloves.

Additional information

Refer to any national measures that may be relevant.

SECTION 16. OTHER INFORMATION

Hazardous concentrations of hydrogen sulphide (H₂S) gas can accumulate in storage and rundown tanks, marine vessel compartments, sump pits or other confined spaces. When opening valves, hatches and dome covers, stand upwind, keep face as far from opening as possible and avoid breathing any gases or vapors. When exposure Concentrations are unknown and respiratory protection is not used, personal H₂S warning devices should be worn. These devices should not be relied on to warn of life threatening concentrations. H₂S fatigues the sense of smell rapidly. The rotten egg odor of H₂S disappears quickly even though high concentrations are still present. The ACGIH TLV / TWA for H₂S is 10 ppm, the STEL is 15 ppm. The company recommends that all exposures to this product be minimized by strictly adhering to recommended.