Imperial Oil

MATERIAL SAFETY DATA SHEET

Date Prepared: November 07, 2005
Supersedes: November 06, 2002
MSDS Number: 826

## 1. PRODUCT INFORMATION

Product Identifier: MIDDLE DISTILLATE
ESSO MARINE GAS OIL (DYED OR CLEAR)
ESSO RAILROAD DIESEL (DYED OR CLEAR)
HEATING OIL (DYED OR CLEAR)
DIESEL (DYED OR CLEAR)
DIESEL QUALITY FURNACE FUEL (DYED OR CLEAR)
DIESEL QUALITY HEATING OIL (DYED OR CLEAR)
ESSO DIESEL (DYED OR CLEAR)
ESSO DIESEL QUALITY COMMERCIAL FUEL (DYED OR CLEAR)
ESSO DIESEL QUALITY FURNACE FUEL
ESSO DIESEL QUALITY HEATING OIL
ESSO FURNACE FUEL (DYED OR CLEAR)
ESSO HEATING OIL (DYED OR CLEAR)
ESSO MARINE DIESEL FUEL (DYED OR CLEAR)
ESSO RAILROAD DIESEL FUEL #3 (DYED OR CLEAR)
ESSO TOBACCO CURING OIL
FUEL OIL 75
FUEL OIL 76
DIESEL MARINE (DYED OR CLEAR)
DIESEL MARINE GAS OIL (DYED OR CLEAR)
FURNACE (DYED OR CLEAR)
DIESEL MARINE - POUR DEPRESSED (DYED OR CLEAR)
NO.2 FUEL OIL
NAVAL FUEL OIL 3-GP-11M (DYED)
ESSO DIESEL FUEL LS
DIESEL LOW SULFUR (DYED OR CLEAR)
NO.2 FUEL OIL FOR EXPORT
DIESEL FOR EXPORT (DYED OR CLEAR)
FURNACE TOBACCO CURING OIL
DIESEL NAVAL 3GP-11 (DYED OR CLEAR)
DIESEL NAVAL 3GP-15 (DYED OR CLEAR)
DIESEL LOW SULFUR RAIL (DYED OR CLEAR)
DIESEL LOW SULFUR DYED EP
DIESEL RAIL (DYED OR CLEAR)
DIESEL RAIL #3 (DYED OR CLEAR)
DIESEL RAIL #3 (HD) (DYED OR CLEAR)
DIESEL LOW SULFUR (032) (DYED OR CLEAR)
FURNACE URBAN (DYED OR CLEAR)

DIESEL (032) (DYED OR CLEAR)
DIESEL LOW SULFUR (EXP DYED)
FURNACE FUEL (032) DYED
DIESEL LOW SULFUR (EXPORT)
MARINE GAS OIL
MDO - MARINE DIESEL OIL 3 CST (CLEAR)
DIESEL NAV 3GP-11(24682)
DIESEL MARINE GAS OIL-INTL (DYED)

Application and Use:
Multi-purpose fuel

Product Description:

A complex mixture of aliphatic, olefinic, naphthenic and aromatic hydrocarbons.

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REGULATORY CLASSIFICATION

WHMIS:
Class B, Division 3: Combustible Liquids.
Class D, Division 2, Subdivision B: Toxic Material

CEPA: CANADIAN ENVIRONMENTAL PROTECTION ACT
All components of this product are either on the Domestic Substances List (DSL) or are exempt.

TDG INFORMATION (RAIL/ROAD):

Shipping Name: FUEL OIL
Class: 3
Packing Group: III
PIN Number: UN1202
Marine Pollutant:N

Please be aware that other regulations may apply.

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| TELEPHONE NUMBERS | | MANUFACTURER/SUPPLIER: |
|---|---|---|
| Emergency 24 hr. | (519) 339-2145 | IMPERIAL OIL |
| Technical Info. | (800) 268-3183 | Products Division |
| | | 111 St Clair Avenue West |
| | | Toronto, Ontario |
| | | M5W 1K3 |

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## 2. REGULATED COMPONENTS

The following components are defined in accordance with sub-paragraph 13(a)(i) to (iv) or paragraph 14(a) of the Hazardous Products Act:

| NAME | % | CAS # |
|---|---|---|
| Fuel Oil No.2 | >99.9 V/V | 68476-30-2 |

## 3. TYPICAL PHYSICAL & CHEMICAL PROPERTIES

Physical State: Liquid
Specific gravity: 0.820 to 0.900 at 15.5 deg C
Viscosity: 1.30 cSt at 40 deg C
to 11.00 cSt at 40 deg C
Vapour Density: 4
Boiling Point: 150 to 370 deg C
Evaporation rate: <1 (1= n-butylacetate)
Solubility in water: negligible
Freezing/Pour Point: -4 deg C -39 (RANGE)
Odour Threshold: not available
Vapour Pressure: 4 kPa at 38 deg C
Appearance/odour: White or pale yellow liquid, petroleum odour

## 4. HEALTH HAZARD INFORMATION

**NATURE OF HAZARD**

**INHALATION:**

Negligible hazard at normal temperatures (up to 38 deg C).
High vapour concentrations are irritating to the eyes, nose, throat and lungs; may cause headaches and dizziness; may be anesthetic and may cause other central nervous system effects.
Avoid breathing vapours or mists.

**EYE CONTACT:**

Slightly irritating, but will not injure eye tissue.

**SKIN CONTACT:**

Low toxicity.
Irritating.

**INGESTION:**

Low toxicity.
Small amounts of this liquid drawn into the lungs from swallowing or vomiting may cause severe health effects (e.g. bronchopneumonia or pulmonary edema).

**CHRONIC:**

Lifetime skin painting tests indicate that materials of similar composition have produced skin cancer in experimental animals. The relationship of these results to humans has not been fully established.

**ACUTE TOXICITY DATA:**

Based on animal testing data from similar materials and products, the acute toxicity of this product is expected to be:
Oral : LD50 > 5000 mg/kg (Rat)
Dermal : LD50 > 2000 mg/kg (Rabbit)
Inhalation : LC50 > 2500 mg/m3 (Rat)

**OCCUPATIONAL EXPOSURE LIMIT:**

ACGIH RECOMMENDS
For Diesel fuel, as total hydrocarbons, 100 mg/m3 (vapour and aersol)

**MANUFACTURER RECOMMENDS:**
For total hydrocarbons 500 mg/m3 (total vapour/aerosol) and 5 mg/m3 (stable aerosols).

Local regulated limits may vary.

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## 5. FIRST AID MEASURES

**INHALATION:**

In emergency situations use proper respiratory protection to immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Call for prompt medical attention.

**EYE CONTACT:**

Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.

**SKIN CONTACT:**

Immediately flush with large amounts of water. Use soap if available. Remove contaminated clothing, including shoes, after flushing has begun. If irritation persists, seek medical attention.

**INGESTION:**

DO NOT induce vomiting since it is important that no amount of the material should enter the lungs (aspiration). Keep at rest. Get prompt medical attention.

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## 6. PREVENTIVE AND CORRECTIVE MEASURES

**PERSONAL PROTECTION:**

The selection of personal protective equipment varies, depending upon

conditions of use.
In open systems where contact is likely, wear safety goggles, chemical-resistant overalls, and chemically impervious gloves.
Where only incidental contact is likely, wear safety goggles, long sleeves, and chemical-resistant gloves.
Where concentrations in air may exceed the occupational exposure limits given in Section 4 and where engineering, work practices or other means of exposure reduction are not adequate, approved respirators may be necessary to prevent overexposure by inhalation.

**ENGINEERING CONTROLS:**

The use of local exhaust ventilation is recommended to control emissions near the source. Laboratory samples should be handled in a fumehood. Provide mechanical ventilation of confined spaces.

**HANDLING, STORAGE AND SHIPPING:**

Keep containers closed. Handle and open containers with care.
Store in a cool, well ventilated place away from incompatible materials.
In keeping with good personal hygiene practices, wash hands thoroughly after handling the material.
Do not handle or store near an open flame, sources of heat, or sources of ignition.
Material will accumulate static charges which may cause a spark. Static charge build-up could become an ignition source. Use proper relaxation and grounding procedures.
Empty containers may contain product residue. Do not pressurize cut, heat, or weld empty containers. Do not reuse empty containers without commercial cleaning or reconditioning.

**LAND SPILL:**

Eliminate source of ignition. Keep public away. Prevent additional discharge of material, if possible to do so without hazard.
Prevent spills from entering sewers, watercourses or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.
Recover by pumping (use an explosion proof motor or hand pump), or by using a suitable absorbent.
Consult an expert on disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill.

**WATER SPILL:**

Remove from surface by skimming or with suitable absorbents. If allowed by local authorities and environmental agencies, sinking and/or suitable dispersants may be used in unconfined waters.
Consult an expert on disposal of recovered material. Ensure disposal in compliance with government requirements and ensure conformity to local disposal regulations. Notify the appropriate authorities immediately. Take all additional action necessary to prevent and remedy the adverse effects of the spill.

## 7. FIRE AND EXPLOSION HAZARD

Flashpoint and method: >40 deg C PMCT ASTM D93

Autoignition: NA  Flammable Limits: LEL: 0.7% UEL: 6.5%

**GENERAL HAZARDS:**

Combustible Liquid; may form combustible mixtures at or above the flash point.
Toxic gases will form upon combustion.
Static Discharge; material may accumulate static charges which may cause a fire.

**FIRE FIGHTING:**

Use water spray to cool fire exposed surfaces and to protect personnel.
Shut off fuel to fire.
Use foam, dry chemical or water spray to extinguish fire.
Respiratory and eye protection required for fire fighting personnel.
Avoid spraying water directly into storage containers due to danger of boilover.
A self-contained breathing apparatus (SCBA) should be used for all indoor fires and any significant outdoor fires. For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of an SCBA may not be required.

**HAZARDOUS COMBUSTION PRODUCTS:**

Smoke, carbon monoxide, carbon dioxide and traces of oxides of sulphur

## 8. REACTIVITY DATA

**STABILITY:**

This product is stable. Hazardous polymerization will not occur.

**INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:**

Strong oxidizing agents

**HAZARDOUS DECOMPOSITION:**

none

## 9. NOTES

All components of this product are listed on the U.S. TSCA inventory.

REVISED.

## 10. PREPARATION

Date Prepared: November 07, 2005
Prepared by: Lubricants & Specialties
IMPERIAL OIL
Products Division
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M5W 1K3
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