

Middle Distillate

IMPERIAL OIL - MIDDLE DISTILLATE

SIGNS & SYMPTOMS OF EXPOSURE

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

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

FIRST AID

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.
- **Emergency 24 hr. (519) 339-2145 IMPERIAL OIL**

STARFIELD RESOURCES INC.

PRODUCT MONOGRAM

IMPERIAL OIL - MIDDLE DISTILLATE

MSDS Safety Information

CAUTION: " The information contained herein relates only to this product or material and may not be valid when used in combination with any other product or material or in any process. If the product is not to be used for a purpose or under conditions which are normal or reasonably foreseeable, this information cannot be relied upon as complete or applicable. For greater certainty, uses other than those described in Section 1 must be reviewed with the supplier. The information contained herein is based on the information available at the indicated date of preparation. This MSDS is for the use of Imperial Oil customers and their employees and agents only. Any further distribution of this MSDS by Imperial Oil customers is prohibited without the written consent of Imperial Oil."

Ingredients

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

Contractor Summary

Emergency 24 hr. (519) 339-2145 IMPERIAL OIL
Technical Info. (800) 268-3183 Products Division
111 St Clair Avenue West
Toronto, Ontario
M5W 1K3
(416) 968-4441

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.

Physical/Chemical Properties

REGULATED COMPONENTS

NAME % CAS #

Fuel Oil No.2 >99.9 V/V 68476-30-2
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

Health Hazards Data

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: Manufacturer recommends: 100 ppm based on composition. Local regulated limits may vary

Handling and Disposal

TDG INFORMATION (RAIL/ROAD):

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

Please be aware that other regulations may apply. 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.

Fire and Explosion Hazard Information

Flashpoint and method: >40 deg C PMCT ASTM D93 Autoignition: NA Flammable Limits: LEL: 0.7% JEL: 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

REACTIVITY DATA

STABILITY: This product is stable. Hazardous polymerization will not occur

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID: Strong oxidizing agents **HAZARDOUS DECOMPOSITION:** none

Control 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.