Material Safety Data Sheet

MSDS ID NO.: 0148MAR019
Revision date: 12/01/2010

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name: Marathon Road Oil Asphalt
Synonym: E-2 Road Oil; Road Oil E-2; E-3 Road Oil; Road Oil E-3; E-4 Road Oil; Road Oil E-4
Chemical Family: Asphalt
Formula: Mixture

Manufacturer:
Marathon Petroleum Company LP
539 South Main Street
Findlay OH 45840

Other information: 419-421-3070
Emergency telephone number: 877-627-5463

2. COMPOSITION/INFORMATION ON INGREDIENTS

Road Oil Asphalt is a petroleum asphalt mixed with varying proportions of No. 2 fuel oil, No. 6 fuel oil and/or Heavy catalytic cracked distillate. Composition varies depending on source of final product. May contain minor amounts of sulfur, nitrogen and oxygen containing compounds.

Product information:

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS Number</th>
<th>Weight %</th>
<th>ACGIH Exposure Limits:</th>
<th>OSHA - Vacated PELs - Time Weighted Ave</th>
<th>Other:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marathon Road Oil Asphalt</td>
<td>Mixture</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Component Information:

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS Number</th>
<th>Weight %</th>
<th>ACGIH Exposure Limits:</th>
<th>OSHA - Vacated PELs - Time Weighted Ave</th>
<th>Other:</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 6 Fuel Oil</td>
<td>68553-00-4</td>
<td>0-100</td>
<td>0.5 mg/m³ TWA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asphalt</td>
<td>8052-42-4</td>
<td>0-100</td>
<td></td>
<td>(inhalable fraction, as benzene-soluble aerosol)</td>
<td></td>
</tr>
<tr>
<td>Distillate, Catalytic Cracked Heavy</td>
<td>64741-61-3</td>
<td>0-48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. 2 Fuel Oil</td>
<td>64741-44-2</td>
<td>0-24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfur Compounds</td>
<td>Mixture</td>
<td>0-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0.01-0.12</td>
<td>Skin - potential significant contribution to overall exposure by the cutaneous route</td>
<td>= 10 ppm TWA = 50 mg/m³ TWA = 15 ppm STEL = 75 mg/m³ STEL</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>7783-06-4</td>
<td>0-0.1</td>
<td>1 ppm TWA 5 ppm STEL</td>
<td>= 10 ppm TWA = 14 mg/m³ TWA = 15 ppm STEL = 21 mg/m³ STEL</td>
<td>Marathon Exposure Guideline: 10 ppm TWA 15 ppm STEL</td>
</tr>
</tbody>
</table>

Notes: The manufacturer has voluntarily elected to reflect exposure limits contained in OSHA’s 1989 air contaminants standard in its MSDS’s, even though certain of those exposure limits were vacated in 1992.
EMERGENCY OVERVIEW

DANGER!

HOT PRODUCT CAN CAUSE BURNS TO SKIN
CONTAINS HYDROGEN SULFIDE GAS. MAY BE FATAL IF INHALED
GAS MAY EVOLVE FROM THIS MATERIAL AND ACCUMULATE IN CONFINED SPACES.
WATER CONTACT CAN CAUSE VIOLENT ERUPTION OF HOT ASPHALT
FUMES FROM HOT PRODUCT CAN CAUSE IRRITATION TO THE EYES, SKIN AND RESPIRATORY SYSTEM
SUSPECT CANCER HAZARD
POTENTIAL REPRODUCTIVE HAZARD

SEE TOXICOLOGICAL INFORMATION SECTION FOR MORE INFORMATION

STABLE

Inhalation:
May release hydrogen sulfide gas which is highly toxic.
Hydrogen sulfide can cause respiratory paralysis and death, depending on the concentration and duration of
exposure. Do not rely on ability to smell vapors, since loss of smell rapidly occurs. Effects of overexposure include
irritation of the nose and throat, nausea, vomiting, diarrhea, abdominal pain and signs of nervous system
depression (e.g. headache, drowsiness, dizziness, loss of coordination and fatigue), irregular heartbeats,
pulmonary edema, weakness and convulsions.
Fumes or vapors from the heated material may be irritating to the respiratory tract.
Overexposure to this material may cause systemic damage including target organ effects listed under
"Toxicological Information."

Ingestion:
Contact with hot material may cause thermal burns. If swallowed at ambient temperature no significant adverse
effects are expected. May cause irritation of the mouth, throat and gastrointestinal tract. Ingestion of large amounts
may cause gastrointestinal blockage.

Skin contact:
Contact with hot material may cause thermal burns. Contact may cause reddening, itching and inflammation. Skin
contact may cause harmful effects in other parts of the body.

Eye contact:
Exposure to hot material can cause thermal burns. Vapors may cause eye irritation and sensitivity to light. Effects
may become more serious with repeated or prolonged contact.

Carcinogenic Evaluation:

<table>
<thead>
<tr>
<th>Product information:</th>
<th>IARC Carcinogens:</th>
<th>NTP Carcinogens:</th>
<th>ACGIH - Carcinogens:</th>
<th>OSHA - Select Carcinogens:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
</tbody>
</table>

Marathon Road Oil Asphalt Mixture

Notes:
The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence for the carcinogenicity of extracts of steam-refined bitumens (asphalts), air-refined bitumens and pooled mixtures of steam- and air-refined bitumens in experimental animals. IARC has determined that there is inadequate evidence that bitumens alone are carcinogenic to humans.

Component Information:
### Notes:

The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of diesel fuel/fuel oil in humans. IARC determined that there was limited evidence for the carcinogenicity of marine diesel fuel in animals. Distillate (light) diesel fuels were not classifiable as to their carcinogenicty to humans (Group 3A).

The International Agency for Research on Cancer (IARC) has also determined that there is sufficient evidence for the carcinogenicity in experimental animals of light and heavy vacuum distillates, of light and heavy catalytically cracked distillates and of cracked residues (catalytically cracked clarified oil) derived from the refining of crude oil.

The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence for the carcinogenicity of residual (heavy) fuel oil in animals.

The International Agency for Research on Cancer (IARC) and the Environmental Protection Agency (EPA) have determined that naphthalene is a possible human carcinogen.

### 4. FIRST AID MEASURES

#### Eye Contact:

If hot material comes in contact with eyes hold the eyelids apart and flush the eye with a large amount of cool water for at least 15 minutes. GET IMMEDIATE MEDICAL ATTENTION.

#### Skin Contact:

If hot material gets on skin, immediately flush affected area with large amounts of cool water. Do not attempt to remove the material from the skin, or to remove contaminated clothing. Get immediate medical attention. For cold material, immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention if irritation persists. Place contaminated clothing in closed container until cleaned or discarded. If clothing is to be laundered, inform the person performing the operation of contaminant's hazardous properties. Discard contaminated leather goods.

#### Ingestion:

Do not induce vomiting. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

#### Inhalation:

Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear and give oxygen. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). Keep affected person warm and at rest. GET IMMEDIATE MEDICAL ATTENTION.

### NOTES TO PHYSICIAN:

**MSDS ID NO.:** 0148MAR019  
**Product name:** Marathon Road Oil Asphalt
4. FIRST AID MEASURES

INHALATION: Inhalation exposure can produce toxic effects. Treat intoxications as hydrogen sulfide exposures. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis.

SKIN: Hot material may cause skin burns. Immerse skin covered with hot material in cool water to limit tissue damage and prevent spread of liquid material. Consider leaving cooled material on skin unless contraindicated by contamination or potential for tattooing. If removal is necessary, mineral oil may be of assistance in minimizing skin loss when removing cool, hardened asphalt.

EYES: Hot material may cause burns to the eyes. Early ophthalmologic evaluation is recommended.

Medical Conditions
Aggravated
By Exposure:
pregnancy, skin, lungs, respiratory system, gastrointestinal tract, liver, bladder, immune system,

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:
For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Specific hazards:
This product is not a combustible liquid per the OSHA Hazard Communication Standard, but will ignite and burn at temperatures exceeding the flash point.

Special protective equipment for firefighters:
Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep run-off water out of sewers and water sources.

Flash point: >200 F
Autoignition temperature: No data available.
Flammable limits in air - lower (%): 1.0
Flammable limits in air - upper (%): 6.0

NFPA rating:
Health: 2
Flammability: 1
Instability: 1
Other: -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate. Contain liquid with sand or soil. Recover and return product to source.
7. HANDLING AND STORAGE

Handling:
Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition.

Significant concentrations of hydrogen sulfide (H2S) gas can be generated and accumulate in storage tanks and bulk transport compartments which may require additional precautions and procedures during loading/unloading. When opening covers and outlet caps on storage tanks, use face shield and gloves to avoid possible injury from pressurized product. Stay upwind and vent open hatches before unloading. Keep heating coils and flues in storage tanks, trucks and kettles covered with product (8”). Do not overheat.

Avoid skin contact. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

Engineering measures: Local or general exhaust required in an enclosed area or when there is inadequate ventilation.

Respiratory protection: Where there is potential for airborne exposure to hydrogen sulfide (H2S) above exposure limits, a NIOSH approved, self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode should be used. When H2S vapors exceed permissible limits, i.e., in confined spaces or bulk transport loading/unloading, a positive-pressure atmosphere supplying respirator is recommended. Self-contained breathing apparatus should be used for fire fighting.

Provided hydrogen sulfide (H2S) is not detected: if there is potential to exceed the exposure limits for asphalt fumes a NIOSH certified air purifying respirator equipped with organic vapor cartridges/canisters with R or P95 filters should be used. A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed when conditions warrant the use of a respirator.

Note: Air purifying respirators are not to be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient atmospheres, (less than 19.5 percent oxygen) or under conditions that are immediately dangerous to life and health (IDLH).

Skin and body protection: Impermeable gloves to prevent skin contact.

Eye protection: Goggles and faceshield when handling hot material.

Hygiene measures: Chemical resistant apron or other protective clothing may be needed to avoid skin contact. Use mechanical ventilation equipment that is explosion-proof.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Black Viscous Liquid
Physical state (Solid/Liquid/Gas): Liquid
Substance type (Pure/Mixture): Mixture
Color: Black
Odor: Hydrocarbon

MSDS ID NO.: 0148MAR019
Product name: Marathon Road Oil Asphalt
9. PHYSICAL AND CHEMICAL PROPERTIES:

- **Molecular weight**: Not determined.
- **pH**: Neutral
- **Boiling point/range (5-95%)**: No data available.
- **Melting point/range**: Not determined.
- **Decomposition temperature**: Not applicable.
- **Specific gravity**: 0.88-0.99
- **Density**: 7.3-8.3 lbs/gal
- **Bulk density**: No data available.
- **Vapor density**: No data available.
- **Vapor pressure**: 1 mm Hg @ 160 F
- **Evaporation rate**: No data available.
- **Solubility**: Negligible
- **Solubility in other solvents**: No data available.
- **Partition coefficient (n-octanol/water)**: No data available.
- **VOC content(%)**: No data available.
- **Viscosity**: No data available.

10. STABILITY AND REACTIVITY

- **Stability**: The material is stable at 70 F, 760 mm pressure.
- **Polymerization**: Will not occur.
- **Hazardous decomposition products**: Combustion produces toxic oxides of sulfur, carbon monoxide, sulfur dioxide, hydrogen sulfide and hydrocarbons.
- **Materials to avoid**: Strong oxidizers such as nitrates, chlorates, peroxides.
- **Conditions to avoid**: Excessive heat, sources of ignition and open flames.

11. TOXICOLOGICAL INFORMATION

- **Acute toxicity**:

**Product information**:

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS Number</th>
<th>Inhalation:</th>
<th>Dermal:</th>
<th>Oral:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marathon Road Oil Asphalt Mixture</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Toxicology Information:
PETROLEUM ASPHALT: Eye and upper respiratory tract irritation has been reported in some asphalt workers (paving and roofing operations) but they are typically mild and transient. Some studies indicate that asphalt paving workers may experience lower respiratory tract symptoms (e.g., coughing, wheezing, and shortness of breath) and pulmonary function changes. Other studies of asphalt workers found no consistent relationship between exposure to asphalt fumes and pulmonary function. Increased levels of 1-hydroxypyrene (a marker for exposure to polycyclic aromatic hydrocarbons) have been observed in the urine of asphalt workers. Genotoxicity studies (e.g., DNA adducts in the urine) of asphalt workers have been largely inconclusive.

A slight increase in lung cancer mortality was reported in a study of European workers exposed to paving and mastic asphalt, but conclusions were equivocal. A follow-up case-control epidemiology study of asphalt paving workers sponsored by the International Association for Research in Cancer (IARC) concluded that there was no evidence that asphalt exposure was linked to lung cancer.

An increase in skin tumors was observed in lifetime studies of laboratory rodents exposed to extracts of asphalt (bitumen). The relevance of these studies to humans is not clear. No increase in skin tumors was observed in a lifetime bioassay where laboratory mice were treated with paving fume condensates. No increase in lung or other tumors were observed in a lifetime inhalation study in laboratory rats exposed to fumes from paving asphalt.

IARC has determined that there is sufficient evidence that extracts of steam and air refined bitumens are carcinogenic in animals, and that there is inadequate evidence that bitumens alone are carcinogenic to humans.

ASPHALTS USED IN ROOFING OPERATIONS: Some asphalts including roofing flux are further processed (oxidized) by the user or customer before use. An increased incidence of skin tumors was observed in a mouse skin carcinogenicity study where animals were exposed to condensed fumes collected from an oxidized roofing asphalt (BURA Type III) at above 450°F. Additional studies where mice were exposed to oxidized roofing asphalt fume condensates both as a tumor initiator and as a tumor promoter indicate that roofing fume condensate caused tumors as a result of initiation.

HYDROGEN SULFIDE: Hydrogen sulfide gas has an unpleasant odor that diminishes with increased exposure. Eye irritation may occur at levels above 4 ppm. Olfactory fatigue occurs rapidly at levels of 50 ppm or higher. Odor is not a reliable warning property. Respiratory effects include irritation with possible pulmonary edema at levels above 50 ppm. At 500 ppm immediate loss of consciousness and death can occur. NIOSH has determined that 100 ppm hydrogen sulfide is immediately dangerous to life and health (IDLH).

NAPHTHALENE: Severe jaundice, neurotoxicity (kernicterus) and fatalities have been reported in young children and infants as a result of hemolytic anemia from overexposure to naphthalene. Persons with Glucose 6-phosphate dehydrogenase (G6PD) deficiency are more prone to the hemolytic effects of naphthalene. Adverse effects on the kidney have been reported in persons overexposed to naphthalene but these effects are believed to be a consequence of hemolytic anemia, and not a direct effect. Hemolytic anemia has been observed in laboratory animals exposed to naphthalene. Laboratory rodents exposed to naphthalene vapor for 2 years (lifetime studies) developed non-neoplastic and neoplastic tumors and inflammatory lesions of the nasal and respiratory tract. Cataracts and other adverse effects on the eye have been observed in laboratory animals exposed to high levels of naphthalene. Findings from a large number of bacterial and mammalian cell mutation assays have been negative. A few studies have shown chromosomal effects (elevated levels of Sister Chromatid Exchange or chromosomal aberrations) in vitro. Naphthalene has been classified as Possibly Carcinogenic to Humans (2B) by IARC, based on findings from studies in laboratory animals.
CATALYTICALLY CRACKED CLARIFIED OIL: Genotoxicity: Findings from in vitro and in vivo studies of this material have been both negative and positive, but the overall weight of evidence suggests this material is genotoxic. Studies of repeated, prolonged dermal exposure in rodents have demonstrated evidence of skin cancer, liver and thymus damage, and anemia. Fetal death and fetal malformations were observed in pregnant rodents following dermal exposure. These findings indicate components of this material may be absorbed through the skin and cause adverse systemic effects. This material may be described as a high-boiling fraction of catalytically cracked petroleum. The International Agency for Research on Cancer (IARC) has identified high-boiling fractions of catalytically cracked petroleum streams as "untreated or mildly-treated oils' and has classified these oils as Group 1, Carcinogenic to Humans.

POLYCYCLIC AROMATIC HYDROCARBONS: This product contains polycyclic aromatic hydrocarbons (PAH) at a level of >0.1%. Some PAH's that have been identified in this product such as benzo(a)pyrene, benz(a)anthracene and indeno(1,2,3-cd)pyrene have been shown to be carcinogenic in experimental animals. An increased risk of cancer has been observed in workers employed in the aluminum production, coal gasification, coal-tar pitch, coke production and iron and steel industries that had been occupationally exposed to PAH'. Since these kinds of PAHs have been measured at high levels in air samples taken in these industries, The International Agency for Research on Cancer (IARC) has concluded that these PAHs are probably carcinogenic to humans.

TARGET ORGANS: central nervous system, respiratory system, lungs, skin, blood eyes, immune system, thymus, spleen, liver, kidney, reproductive organs, testes.

12. ECOTOXICOLOGICAL INFORMATION

Mobility: Not likely to move rapidly with surface or groundwater flows because of its low water solubility.

Ecotoxicity: Practically non-toxic to the aquatic environment.

Bioaccumulation: May bioaccumulate in aquatic organisms.

Persistence/Biodegradation: Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS

Cleanup Considerations: This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

14. TRANSPORT INFORMATION

49 CFR 172.101:

DOT: MSDS ID NO.: 0148MAR019 Product name: Marathon Road Oil Asphalt
14. TRANSPORT INFORMATION

Transport Information: This material when transported via US commerce would be regulated by DOT Regulations.

Proper shipping name: Elevated Temperature Liquid, N.O.S.
UN/Identification No: UN 3257
Hazard Class: 9
Packing group: III
DOT reportable quantity (lbs): Not applicable.

Comments: (Hot Petroleum Asphalt) This material must not be transported when heated at or above its flash point.

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

OSHA Hazard Communication Standard: This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

<table>
<thead>
<tr>
<th>Name</th>
<th>CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPOs</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 6 Fuel Oil</td>
<td>NA</td>
</tr>
<tr>
<td>Asphalt</td>
<td>NA</td>
</tr>
<tr>
<td>Distillate, Catalytic Cracked Heavy</td>
<td>NA</td>
</tr>
<tr>
<td>No. 2 Fuel Oil</td>
<td>NA</td>
</tr>
<tr>
<td>Sulfur Compounds</td>
<td>NA</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>NA</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>= 500 lb TPQ</td>
</tr>
</tbody>
</table>

SARA Section 304: This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

<table>
<thead>
<tr>
<th>Name</th>
<th>CERCLA/SARA - Hazardous Substances and their Reportable Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 6 Fuel Oil</td>
<td>NA</td>
</tr>
<tr>
<td>Asphalt</td>
<td>NA</td>
</tr>
<tr>
<td>Distillate, Catalytic Cracked Heavy</td>
<td>NA</td>
</tr>
<tr>
<td>Name</td>
<td>CERCLA/SARA - Hazardous Substances and their Reportable Quantities</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>No. 2 Fuel Oil</td>
<td>NA</td>
</tr>
<tr>
<td>Sulfur Compounds</td>
<td>NA</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>100 lb final RQ = 45.4 kg final RQ</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>100 lb final RQ = 45.4 kg final RQ</td>
</tr>
</tbody>
</table>

**SARA Section 311/312**

The following EPA hazard categories apply to this product:

- Acute Health Hazard
- Chronic Health Hazard

**SARA Section 313:**

This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R:

<table>
<thead>
<tr>
<th>Name</th>
<th>CERCLA/SARA 313 Emission reporting:</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 6 Fuel Oil</td>
<td>None</td>
</tr>
<tr>
<td>Asphalt</td>
<td>None</td>
</tr>
<tr>
<td>Distillate, Catalytic Cracked Heavy</td>
<td>None</td>
</tr>
<tr>
<td>No. 2 Fuel Oil</td>
<td>None</td>
</tr>
<tr>
<td>Sulfur Compounds</td>
<td>None</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>0.1 % de minimis concentration</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>None</td>
</tr>
</tbody>
</table>

**State and Community Right-To-Know Regulations:**

The following component(s) of this material are identified on the regulatory lists below:

No. 6 Fuel Oil
- Louisiana Right-To-Know: Not Listed
- California Proposition 65: Not Listed
- New Jersey Right-To-Know: Not Listed
- Pennsylvania Right-To-Know: Not Listed
- Massachusetts Right-To Know: Not Listed
- Florida substance List: Not Listed
- Rhode Island Right-To-Know: Not Listed
- Michigan critical materials register list: Not Listed
- Massachusetts Extraordinarily Hazardous Substances: Not Listed

- California - Regulated Carcinogens: Not Listed
- Pennsylvania RTK - Special Hazardous Substances: Not Listed
- New Jersey - Special Hazardous Substances: Not Listed
- New Jersey - Environmental Hazardous Substances List: Not Listed
- Illinois - Toxic Air Contaminants: Not Listed
- New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed

Asphalt
- Louisiana Right-To-Know: Not Listed
- California Proposition 65: Not Listed
- New Jersey Right-To-Know: sn 0170
- Pennsylvania Right-To-Know: Present
- Massachusetts Right-To Know: Present
- Florida substance List: Not Listed.
- Rhode Island Right-To-Know: Toxic; Flammable
- Michigan critical materials register list: Not Listed.
No. 6 Fuel Oil
Massachusetts Extraordinarily Hazardous Substances: Not Listed
California - Regulated Carcinogens: Not Listed
Pennsylvania RTK - Special Hazardous Substances: Not Listed
New Jersey - Special Hazardous Substances: flammable - third degree
New Jersey - Environmental Hazardous Substances List: Not Listed
Illinois - Toxic Air Contaminants: Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:

Distillate, Catalytic Cracked Heavy
Louisiana Right-To-Know: Not Listed
California Proposition 65: Not Listed
New Jersey Right-To-Know: Not Listed
Pennsylvania Right-To-Know: Not Listed
Massachusetts Right-To Know: Not Listed
Florida substance List: Not Listed
Rhode Island Right-To-Know: Not Listed
Michigan critical materials register list: Not Listed
Massachusetts Extraordinarily Hazardous Substances: Not Listed
California - Regulated Carcinogens: Not Listed
Pennsylvania RTK - Special Hazardous Substances: Not Listed
New Jersey - Special Hazardous Substances: Not Listed
New Jersey - Environmental Hazardous Substances List: Not Listed
Illinois - Toxic Air Contaminants: Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:

No. 2 Fuel Oil
Louisiana Right-To-Know: Not Listed
California Proposition 65: Not Listed
New Jersey Right-To-Know: Not Listed
Pennsylvania Right-To-Know: Not Listed
Massachusetts Right-To Know: Not Listed
Florida substance List: Not Listed
Rhode Island Right-To-Know: Not Listed
Michigan critical materials register list: Not Listed
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California - Regulated Carcinogens: Not Listed
Pennsylvania RTK - Special Hazardous Substances: Not Listed
New Jersey - Special Hazardous Substances: Not Listed
New Jersey - Environmental Hazardous Substances List: Not Listed
Illinois - Toxic Air Contaminants: Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:

Sulfur Compounds
Louisiana Right-To-Know: Not Listed
California Proposition 65: Not Listed
No. 6 Fuel Oil
  New Jersey Right-To-Know: Not Listed.
  Pennsylvania Right-To-Know: Not Listed.
  Massachusetts Right-To-Know: Not Listed.
  Florida substance List: Not Listed.
  Rhode Island Right-To-Know: Not Listed
  Michigan critical materials register list: Not Listed.
  Massachusetts Extraordinarily Hazardous Substances: Not Listed
  California - Regulated Carcinogens: Not Listed
  Pennsylvania RTK - Special Hazardous Substances: Not Listed
  New Jersey - Special Hazardous Substances: Not Listed
  New Jersey - Environmental Hazardous Substances List:
  SN 1322 TPQ 500 lb
  Not Listed
  Illinois - Toxic Air Contaminants: Not Listed
  New York - Reporting of Releases Part 597 - List of Hazardous Substances:
  Not Listed

Naphthalene
  Louisiana Right-To-Know: Not Listed
  California Proposition 65: carcinogen, initial date 4/19/02

  New Jersey Right-To-Know: sn 1322
  Pennsylvania Right-To-Know: Environmental hazard
  Massachusetts Right-To-Know: Present
  Florida substance List: Not Listed.
  Rhode Island Right-To-Know: Toxic; Flammable
  Michigan critical materials register list: Not Listed.
  Massachusetts Extraordinarily Hazardous Substances: Not Listed
  California - Regulated Carcinogens: Not Listed
  Pennsylvania RTK - Special Hazardous Substances: Not Listed
  New Jersey - Special Hazardous Substances: carcinogen
  New Jersey - Environmental Hazardous Substances List:
  SN 1322 TPQ 500 lb
  Not Listed
  Illinois - Toxic Air Contaminants: Present
  New York - Reporting of Releases Part 597 - List of Hazardous Substances:
  = 1 lb RQ land/water
  = 100 lb RQ air

Hydrogen Sulfide
  Louisiana Right-To-Know: Not Listed
  California Proposition 65: Not Listed
  New Jersey Right-To-Know: sn 1017
  Pennsylvania Right-To-Know: Environmental hazard
  Massachusetts Right-To-Know: Extraordinarily hazardous
  Florida substance List: Not Listed.
  Rhode Island Right-To-Know: Toxic; Flammable
  Michigan critical materials register list: Not Listed.
  Massachusetts Extraordinarily Hazardous Substances: extraordinarily hazardous
  California - Regulated Carcinogens: Not Listed
  Pennsylvania RTK - Special Hazardous Substances: Not Listed
No. 6 Fuel Oil

New Jersey - Special Hazardous Substances: flammable - fourth degree
New Jersey - Environmental Hazardous Substances List: SN 1017 TPQ 500 lb
Illinois - Toxic Air Contaminants: Not Listed
New York - Reporting of Releases Part 597 -
List of Hazardous Substances: = 100 lb RQ air
= 100 lb RQ land/water

Canadian Regulatory Information:

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

<table>
<thead>
<tr>
<th>Name</th>
<th>Canada - WHMIS: Classifications of Substances</th>
<th>Canada - WHMIS: Ingredient Disclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphthalene</td>
<td>B4, D2A</td>
<td>1 %</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>A, B1, D1A, D2B</td>
<td>1 %</td>
</tr>
</tbody>
</table>

NOTE: Not Applicable.

16 OTHER INFORMATION

Additional Information: No data available.

Prepared by: Mark S. Swanson, Manager, Toxicology and Product Safety

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End of Safety Data Sheet