Material Safety Data Sheet

MSDS ID NO.: 0161MAR019
Revision date: 03/07/2013

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name: Marathon Carbonblack Feedstock
Synonym: Catalytic Cracked Clarified Oil; Catalytic Cracked Slurry Oil; Slurry Oil
Chemical Family: Petroleum Hydrocarbon
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

Carbonblack Feedstock is a complex mixture of hydrocarbons produced as the residual fraction of distillation products from a catalytic cracking process. It consists of hydrocarbons having carbon numbers predominantly >C20 and boiling above 662°F. The CAS description of this stream states that it is likely to contain >5% of 4 to 6-membered condensed ring polycyclic aromatic hydrocarbons.

This product was analyzed by MPC and found to contain 1.2-2.3% of the 22 3-7 ring polycyclic aromatic compounds identified as Persistent Bioaccumulative Toxic (PBT) Chemicals subject to reporting under EPA EPCRA Section 313 regulations.

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 Carbonblack Feedstock</td>
<td>64741-62-4</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Catalytic Cracked Clarified Oil</td>
<td>64741-62-4</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulfur Compounds</td>
<td>Mixture</td>
<td>0.5-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-methylchrysene</td>
<td>3697-24-3</td>
<td>0.1-0.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzo(j)fluoranthene</td>
<td>205-82-3</td>
<td>0.09-0.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzo(a)phenanthrene</td>
<td>218-01-9</td>
<td>0.1-0.3</td>
<td>= 0.2 mg/m³ TWA</td>
<td>= 0.2 mg/m³ TWA</td>
<td></td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>5032-8</td>
<td>0.05-0.1</td>
<td>= 0.2 mg/m³ TWA</td>
<td>= 0.2 mg/m³ TWA</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>7783-06-4</td>
<td>0.01</td>
<td>1 ppm TWA</td>
<td>10 ppm TWA</td>
<td></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

WARNING!
CONTAINS HYDROGEN SULFIDE GAS. MAY BE FATAL IF INHALED.
GAS MAY EVOLVE FROM THIS MATERIAL AND ACCUMULATE IN CONFINED SPACES.
VAPORS, FUMES, OR MISTS MAY CAUSE RESPIRATORY TRACT IRRITATION.
OVEREXPOSURE MAY CAUSE CNS DEPRESSION.

POTENTIAL REPRODUCTIVE HAZARD
SUSPECT CANCER HAZARD.
REPEATED SKIN CONTACT HAS PRODUCED SYSTEMIC TOXICITY IN LABORATORY ANIMALS.
SEE TOXICOLOGICAL INFORMATION SECTION FOR MORE INFORMATION.

COMBUSTIBLE LIQUID AND VAPOR
STABLE

POTENTIAL HEALTH EFFECTS FROM OVEREXPOSURE

Inhalation:
May release hydrogen sulfide gas which is highly toxic.
May be harmful or fatal if inhaled. 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.
Significant concentrations of hydrogen sulfide gas can be present in the vapor space of storage tanks and bulk transport compartments (See Sections 7, 8 & 11).
See Toxicological Effects (Section 11) for more information.

Ingestion:
Swallowing this material may be harmful. Ingestion may cause gastrointestinal irritation and diarrhea. Symptoms may include salivation, pain, nausea, vomiting and diarrhea. Exposure may also cause central nervous system symptoms similar to those listed under "Inhalation" (see Inhalation section).

Skin contact:
Contact may cause reddening, itching and inflammation. Skin contact may cause harmful effects in other parts of the body. See "Toxicological Information" Section for more information.

Eye contact:
Contact may cause pain and severe reddening and inflammation of the conjunctiva.
Effects may become more serious with repeated or prolonged contact.

Carcinogenic Evaluation:

Product information:

<table>
<thead>
<tr>
<th>Name</th>
<th>IARC Carcinogens:</th>
<th>NTP Carcinogens:</th>
<th>ACGIH - Carcinogens:</th>
<th>OSHA - Select Carcinogens:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marathon Carbonblack Feedstock 64741-62-4</td>
<td>NE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
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) has concluded that this category of untreated and mildly treated oils are carcinogenic to humans (Group 1).
<table>
<thead>
<tr>
<th>Name</th>
<th>IARC Carcinogens:</th>
<th>NTP Carcinogens:</th>
<th>ACGIH - Carcinogens:</th>
<th>OSHA - Select Carcinogens:</th>
</tr>
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<tbody>
<tr>
<td>3697-24-3</td>
<td></td>
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<td></td>
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<tr>
<td>205-82-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>218-01-9</td>
<td></td>
<td>Reasonably Anticipated To Be A Human Carcinogen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>Monograph 92 [in preparation], Supplement 7 [1987], Monograph 32 [1983] (overall evaluation upgraded from 2B to 1 based on mechanistic and other relevant data)</td>
<td>Reasonably Anticipated To Be A Human Carcinogen (listed under Polycyclic aromatic hydrocarbons)</td>
<td>A2 - Suspected Human Carcinogen</td>
<td>Present</td>
</tr>
<tr>
<td>50-32-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

The International Agency for Research on Cancer (IARC) has determined that there is sufficient evidence for the carcinogenicity of catalytically cracked clarified oil (carbonblack feedstock) in animals.

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 carcinogenicity to humans (Group 3A).

The International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) have concluded that certain polycyclic aromatic hydrocarbons, i.e. (benzo(a)pyrene, benz(a)anthracene, benzo(a)phenanthrene, indeno(1,2,3-cd)pyrene, benzo(j)fluoranthene, benzo(j,k,fluorine, benzo(g,h,i)perylene, and 5-methylchrysene are probably carcinogenic to humans (Group 2A and B).

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:
Flush eyes with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.

Skin Contact:
Wash with soap and large amounts of water for at least 15 minutes. Remove contaminated clothing. If symptoms or irritation occur, call a physician.

Ingestion:
Ingestion not likely. If swallowed, do not induce vomiting and do not give liquids. Immediately call a physician.

Inhalation:
If affected, move person to fresh air. If breathing is difficult, administer oxygen. If not breathing or if no heartbeat, give artificial respiration or cardiopulmonary resuscitation (CPR). Immediately call a physician. If symptoms or irritation occur with any exposure, call a physician.

NOTES TO PHYSICIAN:
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.

Medical Conditions Aggravated By Exposure:
Preexisting skin conditions, respiratory disorders, and impaired liver function may be aggravated by exposure to components of this product.

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 has been determined to be a combustible liquid per the OSHA Hazard Communication Standard and should be handled accordingly. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

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 surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.

Flash point: 140 - 230 F
Autoignition temperature: 775-870 F
Flammable limits in air - lower (%): No data available.
Flammable limits in air - upper (%): No data available.
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. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues. This product may flash if product temperature is >140 F. Avoid skin contact.

Harmful concentrations of hydrogen sulfide (H2S) gas can accumulate in excavations and low-lying areas as well as the vapor space of storage and bulk transport compartments. Stay upwind and vent open hatches before unloading. 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: Not required under normal conditions and adequate ventilation. Use atmosphere supplying respirators in confined spaces or when vapors exceed permissible limits. Self-contained breathing apparatus should be used for fire fighting.

Skin and body protection: Impermeable gloves (e.g., nitrile, viton, tyvek/saranex 23) to prevent skin contact.

Eye protection: Goggles and faceshield when handling hot material.

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

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Light to Dark Brown Liquid
Physical state (Solid/Liquid/Gas): Liquid
Substance type (Pure/Mixture): Mixture
Color: Light to dark brown.
Odor: Aromatic Sweet
Molecular weight: Not determined.
PH: Neutral
Boiling point/range (5-95%): 300-1300 F
Melting point/range: Not determined.
Decomposition temperature: Not applicable.

MSDS ID NO.: 0161MAR019
Product name: Marathon Carbonblack Feedstock
9. PHYSICAL AND CHEMICAL PROPERTIES:

Specific gravity: 1.02-1.12
Density: 8.5-9.3 lbs/gal
Bulk density: No data available.
Vapor density: C.A. 7-8
Vapor pressure: <15 mm Hg
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 carbon monoxide, aldehydes, aromatic and other hydrocarbons.
Materials to avoid: Strong oxidizers such as nitrates, chlorates, peroxides.
Conditions to avoid: Sources of heat or ignition.

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 Carbonblack Feedstock</td>
<td>64741-62-4</td>
<td>No data available</td>
<td>LD50 &gt;2 gm/kg [Rabbit]</td>
<td>LD50 &gt;4 gm/kg [Rat]</td>
</tr>
</tbody>
</table>

Toxicology Information:
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 (PAHs): Cancer is the most significant endpoint for PAHs. Certain PAHs are weak carcinogens which become carcinogenic after undergoing metabolism. Chronic or repeated exposure increases the likelihood of tumor initiation. Increased incidence of tumors of the skin, bladder, lung and gastrointestinal tract have been described in individuals overexposed to certain PAHs. Overexposure to PAHs has also been associated with photosensitivity and eye irritation. Inhalation overexposure of PAHs has been associated with respiratory tract irritation, cough, and bronchitis. Dermal overexposure has been associated with precancerous lesions, erythema, dermal burns, photosensitivity, acneiform lesions and irritation. Oral overexposure to PAHs has been associated with precancerous growths of the mouth (leukoplakia). Mild nephrotoxicity, congestion and renal cortical hemorrhages and elevated liver function tests, changes in the immune system and other effects have been observed in rats exposed to high levels of PAHs by ingestion. The International Agency for Research on Cancer (IARC) has concluded that some PAHs are probably carcinogenic to humans.

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).

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

12. ECOTOXICOLOGICAL INFORMATION

Mobility: May partition into air, soil and water.

Ecotoxicity: Toxic to aquatic organisms.

Bioaccumulation: May bioaccumulate in aquatic organisms.

Persistance/Biodegradation: Not readily biodegradable.

13. DISPOSAL CONSIDERATIONS
13. DISPOSAL CONSIDERATIONS

Cleanup Considerations: This material as supplied and by itself, when discarded or disposed of, is not an EPA RCRA hazardous waste according to federal regulations. 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:

Transport Information: This material when transported via US commerce would be regulated by DOT Regulations.
Proper shipping name: Hydrocarbons, Liquid, N.O.S.
UN/Identification No: UN 3295
Hazard Class: 3
Packing group: III
DOT reportable quantity (lbs): Not applicable.

**Please Note - A combustible liquid that is not a hazardous substance, a hazardous waste, or marine pollutant is NOT Regulated by the DOT if it is a mixture of one or more components that:
Has a flash point at or above 93 °C (200 °F), comprises at least 99 percent of the volume of the mixture, and is not offered for transportation or transported as a liquid at a temperature at or above its flash point. (reference 173.150(f)(4)).

Proper shipping name: Hydrocarbons, Liquid, N.O.S.
UN/Identification No: UN 3295
Hazard Class: 3
Packing group: III

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 TPQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSDS ID NO.: 0161MAR019</td>
<td>Product name: Marathon Carbonblack Feedstock</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>Catalytic Cracked Clarified Oil</td>
<td>NA</td>
</tr>
<tr>
<td>Sulfur Compounds</td>
<td>NA</td>
</tr>
<tr>
<td>5-methylchrysene</td>
<td>NA</td>
</tr>
<tr>
<td>Benzo(j)fluoranthene</td>
<td>NA</td>
</tr>
<tr>
<td>Benzo(a)phenanthrene</td>
<td>NA</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>NA</td>
</tr>
<tr>
<td>Hydrogen Sulfide</td>
<td>= 500 lb TPQ</td>
</tr>
</tbody>
</table>

### SARA Section 311/312

The following EPA hazard categories apply to this product:

- Acute Health Hazard
- Chronic Health Hazard
- Fire Hazard

### SARA Section 313:

This product contains the following components, which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R):

<table>
<thead>
<tr>
<th>Name</th>
<th>CERCLA/SARA 313 Emission reporting:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalytic Cracked Clarified Oil</td>
<td>None</td>
</tr>
<tr>
<td>Sulfur Compounds</td>
<td>None</td>
</tr>
<tr>
<td>5-methylchrysene</td>
<td>= 0.1 % Supplier notification limit</td>
</tr>
<tr>
<td>Benzo(j)fluoranthene</td>
<td>= 0.1 % Supplier notification limit</td>
</tr>
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</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:

- Catalytic Cracked Clarified 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
Catalytic Cracked Clarified Oil

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

5-methylchrysene

Louisiana Right-To-Know: Not Listed
California Proposition 65: Carcinogen, initial date 4/1/88
New Jersey Right-To-Know: Sn 3367
Pennsylvania Right-To-Know: Special hazardous substance
Massachusetts Right-To Know: Carcinogen; Extraordinarily hazardous
Florida substance List: Not Listed.
Rhode Island Right-To-Know: Toxic
Michigan critical materials register list: Not Listed.
Massachusetts Extraordinarily Hazardous Substances:
California - Regulated Carcinogens: Not Listed
Pennsylvania RTK - Special Hazardous Substances:
New Jersey - Special Hazardous Substances: Not Listed
New Jersey - Environmental Hazardous Substances List:
Illinois - Toxic Air Contaminants Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:

Benzo(j)fluoranthene

Louisiana Right-To-Know: Not Listed
California Proposition 65: Carcinogen, initial date 7/1/87
New Jersey Right-To-Know: Sn 0210
Pennsylvania Right-To-Know: Environmental hazard; Special hazardous substance
Massachusetts Right-To Know: Carcinogen; Extraordinarily hazardous
Florida substance List: Not Listed.
Catalytic Cracked Clarified Oil
Rhode Island Right-To-Know: Carcinogen
Michigan critical materials register list: Not Listed.
Massachusetts Extraordinarily Hazardous Substances:
California - Regulated Carcinogens: Not Listed
Pennsylvania RTK - Special Hazardous Substances:
New Jersey - Special Hazardous Substances: Not Listed
New Jersey - Environmental Hazardous Substances List:
Illinois - Toxic Air Contaminants
New York - Reporting of Releases Part 597 - List of Hazardous Substances:

Benzo(a)phenanthrene
Louisiana Right-To-Know: Not Listed
California Proposition 65: Carcinogen, initial date 1/1/90
New Jersey Right-To-Know: sn 0441
Pennsylvania Right-To-Know: Environmental hazard
Massachusetts Right-To-Know: Carcinogen; Extraordinarily hazardous
Florida substance List: Not Listed.
Rhode Island Right-To-Know: Toxic
Michigan critical materials register list: Not Listed.
Massachusetts Extraordinarily Hazardous Substances:
California - Regulated Carcinogens: Not Listed
Pennsylvania RTK - Special Hazardous Substances:
New Jersey - Special Hazardous Substances: Carcinogen
New Jersey - Environmental Hazardous Substances List:
Illinois - Toxic Air Contaminants
New York - Reporting of Releases Part 597 - List of Hazardous Substances:
= 1 lb RQ land/water
= 100 lb RQ air

Benzo(a)pyrene
Louisiana Right-To-Know: Not Listed
California Proposition 65: Carcinogen, initial date 7/1/87
New Jersey Right-To-Know: sn 0207
Pennsylvania Right-To-Know: Environmental hazard; Special hazardous substance
Massachusetts Right-To-Know: Carcinogen; Extraordinarily hazardous
Florida substance List: Not Listed.
Rhode Island Right-To-Know: Toxic
Michigan critical materials register list: = 10 lb Annual usage threshold
Massachusetts Extraordinarily Hazardous Substances:
California - Regulated Carcinogens: Not Listed
Pennsylvania RTK - Special Hazardous Substances:
New Jersey - Special Hazardous Substances: Carcinogen; mutagen
New Jersey - Environmental Hazardous Substances List:
Illinois - Toxic Air Contaminants
New York - Reporting of Releases Part 597 - List of Hazardous Substances:
Catalytic Cracked Clarified Oil

**New York - Reporting of Releases Part 597 -**

List of Hazardous Substances:  
- 1 lb RQ air

**Hydrogen Sulfide**

<table>
<thead>
<tr>
<th>Louisiana Right-To-Know:</th>
<th>Not Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Proposition 65:</td>
<td>Not Listed</td>
</tr>
<tr>
<td>New Jersey Right-To-Know:</td>
<td>sn 1017</td>
</tr>
<tr>
<td>Pennsylvania Right-To-Know:</td>
<td>Environmental hazard</td>
</tr>
<tr>
<td>Massachusetts Right-To Know:</td>
<td>Extraordinarily hazardous</td>
</tr>
<tr>
<td>Florida substance List:</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Rhode Island Right-To-Know:</td>
<td>Toxic; Flammable</td>
</tr>
<tr>
<td>Michigan critical materials register list:</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Massachusetts Extraordinarily Hazardous Substances:</td>
<td>Extraordinarily hazardous</td>
</tr>
</tbody>
</table>

**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>5-methylchrysene</td>
<td>D2A</td>
<td>1 %</td>
</tr>
<tr>
<td>Benzo(a)fluoranthene</td>
<td>D2A, D2B</td>
<td></td>
</tr>
<tr>
<td>Benzo(a)phenanthrene</td>
<td>D2A</td>
<td>0.1 %</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>D2A</td>
<td>0.1 %</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:** The pronounced and easily-recognized rotten egg odor of hydrogen sulfide gas (H2S) can be detected at concentrations as low as 0.003-0.13 ppm. Since higher H2S concentrations (100-200 ppm) cause olfactory fatigue and other hydrocarbon odors can "mask" H2S, the sense of smell cannot be used as a reliable indicator of H2S exposure.

**Prepared by:** Diana Samples-Caudill, Toxicology and Product Safety

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**End of Safety Data Sheet**