Material Safety Data Sheet

MSDS ID NO.: 0258MAR019
Revision date: 09/12/2005

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name: Marathon Synfuel Binder - Pitch
Synonyms: Pitch Synfuel Binder; Synfuel Binder Pitch
Chemical Family: Petroleum Pitch
Formula: Mixture

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

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

2. COMPOSITION/INFORMATION ON INGREDIENTS

Petroleum Pitch is a complex mixture of the residue from the distillation of thermal cracked residuum and/or catalytic cracked clarified oil with a softening point of 104 to 356 F. Composed primarily of a complex combination of three or more membered condensed ring aromatic hydrocarbons.

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 Synfuel Binder - Pitch</td>
<td>68187-58-6</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>Petroleum Pitch</td>
<td>68187-58-6</td>
<td>80-100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel Oil, Residual</td>
<td>68476-33-5</td>
<td>20-25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catalytic Cracked Clarified Oil</td>
<td>64741-62-4</td>
<td>0-25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>193-39-5</td>
<td>0.1-0.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>50-32-8</td>
<td>0.1-0.3</td>
<td>= 0.2 mg/m³ TWA (benzene soluble fraction)</td>
<td>= 0.2 mg/m³ TWA benzene soluble fraction</td>
<td></td>
</tr>
<tr>
<td>Benz(a)anthracene</td>
<td>56-55-3</td>
<td>0.1-0.3</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>
</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.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
THIS PRODUCT IS A MOLTEN BLACK COMBUSTIBLE VISCOSOUS LIQUID WHEN HEATED THAT WILL CAUSE THERMAL BURNS UPON SKIN CONTACT. THIS PRODUCT CONTAINS POLYNUCLEAR AROMATIC HYDROCARBONS SOME OF WHICH HAVE PRODUCED CANCER IN LABORATORY ANIMALS AND HUMANS. REPEATED SKIN CONTACT TO SOME COMPONENTS OF THIS PRODUCT HAS PRODUCED SYSTEMIC TOXICITY (INCLUDING LIVER DAMAGE) IN LABORATORY ANIMALS. VAPORS CAN PRODUCE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION. THIS PRODUCT IS NOT A COMBUSTIBLE MATERIAL PER THE OSHA HAZARD COMMUNICATION STANDARD, BUT WILL IGNITE AND BURN AT TEMPERATURES EXCEEDING THE FLASH POINT.

OSHA WARNING LABEL:

DANGER!
CONTACT WITH HEATED MATERIAL MAY CAUSE SEVERE BURNS.
THIS PRODUCT CONTAINS POLYNUCLEAR AROMATIC HYDROCARBONS SOME OF WHICH HAVE PRODUCED CANCER IN LABORATORY ANIMALS AND HUMANS.
REPEATED SKIN CONTACT TO SOME COMPONENTS IN THIS PRODUCT HAS PRODUCED SYSTEMIC TOXICITY (INCLUDING LIVER DAMAGE) IN LABORATORY ANIMALS.

CONSUMER WARNING LABEL:

A CONSUMER WARNING LABEL IS NOT APPLICABLE FOR THIS PRODUCT.

Inhalation: Vapors and fumes can cause respiratory and nasal irritation.
Ingestion: Product would be expected to have a low order of acute toxicity.
Skin contact: Hot product causes severe burns. Frequent or prolonged contact with cold material may cause irritation. Dermal exposure plus sunlight could cause a phototoxic reaction that resembles exaggerated sunburn.
Eye contact: Hot product causes severe burns.

Carcinogenic Evaluation:

<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 Synfuel Binder - Pitch 68187-58-6</td>
<td>NE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes:
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 (including heavy thermocracked distillates/residues) 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) has determined there is sufficient evidence for the carcinogenicity of catalytically cracked clarified oils (carbonblack feedstock) in experimental animals.

Component 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>
</table>
4. FIRST AID MEASURES

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.

Skin contact:
For contact with hot molten material, immerse or flush skin with cold water for at least 15 minutes. Call a physician. Do not attempt to remove solidified material since removal may cause further tissue injury. Cold material over a burn should not be removed except by a physician. Remove cold material (not associated with a burn) with waterless handcleaner and then wash with soap and water. If symptoms or irritation occur, call a physician.

Ingestion:
Ingestion not likely. If large amounts are swallowed, immediately call a physician.

Eye contact:
For contact with hot molten material, flush with large amounts of tepid water for at least 15 minutes. Immediately call a physician.

For contact with vapors or dust, flush with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.

Notes to physician:
Recommended practice is to not attempt to remove hot material associated with a burn. Allow the solidified material to remain in place until cooled so it can naturally fall off. Natural separation will occur in 48-72 hours. If removal is attempted, mineral oil may be used to remove asphalt once it is cooled. For best results, work it into the skin around the material and allow the material to "float" off.

Medical conditions aggravated by exposure:
Preexisting skin, eye and respiratory disorders may be aggravated by exposure to components of this product.
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 material per the OSHA Hazard Communication Standard, but will ignite and burn at temperatures exceeding the flash point. 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. Use water spray to cool exposed surfaces from as far a distance as possible. Keep run-off water out of sewers and water sources.

Flash point: 392 F; 200 C (Min)
Autoignition temperature: No data available.
Flammable limits in air - lower (%): No data available.
Flammable limits in air - upper (%): No data available.

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

HMIS classification:
Health: 2
Flammability: 1
Reactivity: 1
Special: *See Section 8 for guidance in selection of personal protective equipment.

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 substance has entered a watercourse 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.

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. 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. This product may flash if product temperature is >140 F.

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

MSDS ID NO.: 0258MAR019
Product name: Marathon Synfuel Binder - Pitch
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; otherwise, an organic vapor respirator with pre-filter for fumes can be used. Self-contained breathing apparatus should be used for fire fighting.

Skin and body protection: Insulated gloves when handling hot material. Impermeable gloves (e.g. nitrile, viton, tyvek/saranex 23) should be used to prevent skin contact of cold material.

Eye protection: Goggles and faceshield when handling hot material.

Hygiene measures: Rubberized suits or coats may be needed for some maintenance operations with hot material. Chemical resistant apron or other protective clothing may be needed to avoid skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance: Black Viscous Liquid
Physical state (Solid/Liquid/Gas): Liquid
Substance type (Pure/Mixture): Pure
Color: Black
Odor: Tar
Molecular weight: Not determined.
pH: Neutral
Boiling point/range (5-95%): No data available.
Melting point/range: 166-174 F; Softens
Decomposition temperature: Not applicable.
Specific gravity: 1.18
Density: 9.84 lbs/gal @ 60 F
Bulk density: No data available.
Vapor density: No data available.
Vapor pressure: Negligible @ 77 F
Evaporation rate: No data available.
Solubility: Not determined
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: Hydrogen sulfide, sulfur dioxide, carbon monoxide, hydrocarbons.
Materials to avoid: Strong oxidizers such as nitrates, chlorates, peroxides.
Conditions to avoid: Sources of heat or ignition.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: 

MSDS ID NO.: 0258MAR019  Product name: Marathon Synfuel Binder - Pitch
**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 Synfuel Binder - Pitch</td>
<td>68187-58-6</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Lifetime skin painting studies with petroleum pitch has produced tumors in mice following prolonged and repeated exposure. Petroleum pitch has been found to be positive in a modified Ames mutagenicity assay.

Summary of health effect data on pitch components:

This product may contain No. 6 fuel oil at a level of >1.0%. Lifetime skin painting studies in animals with products similar to Heavy catalytic cracked distillate, No. 6 fuel oil and/or its components have produced tumors in animals following prolonged and repeated skin contact. Repeated dermal application has produced severe irritation and systemic toxicity in subacute toxicity studies. Some components of this product were found to be positive in some mutagenicity tests while negative in others. The exact relationship between these results and human health is not known.

Catalytic cracked slurry oil (CCSO) may be present in concentrations up to 25% in this product. Lifetime skin painting studies in animals with CCSO have produced tumors in animals following prolonged and repeated skin contact. Repeated dermal application of CCSO (30 mg/kg/day for 13 weeks) in rats resulted in anemia, liver degeneration and injury to bone marrow and lymphoid tissues. 100% mortality was observed at 2,000 mg/kg/day within three weeks. Repeated dermal application (30 mg/kg/day) of CCSO to pregnant rats during gestation produced maternal and fetal toxicity. Deaths and systemic toxicity (liver, thymus and blood). The number of viable offspring decreased at doses of 30 mg/kg/day and above. Many of the developmental effects (anomalies, resorptions and growth inhibition) were observed at doses which produced maternal toxicity. In a separate developmental study CCSO produced decreases in body weights and food consumption at doses from 10-250 mg/kg/day. Although fertility and reproductive function were not affected, the no observable adverse effect level for CCSO administered dermally was 1 mg/kg/day.

This product contains polynuclear aromatic hydrocarbons (PAC) at a level of >0.1%. Some PACs 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 polynuclear aromatic hydrocarbons. Since these kinds of PACs 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 PACs are probably carcinogenic to humans.

**12. ECOLOGICAL INFORMATION**

Ecotoxicity effects: If spilled, hot product and/or the coating action of the oil components could harm plant life. This product does not concentrate or accumulate in the food chain. The 24 hour TLM of the water soluble fraction of bunker C fuel oil is 3-6 ppm in marine and estuarine crustaceans and fish.

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

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.

TDG (Canada):
Proper shipping name: Elevated Temperature Liquid, N.O.S.
UN/Identification No: UN 3257
Hazard Class: 9
Packing group: III
Regulated substances: Not applicable.

15. REGULATORY INFORMATION

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>Petroleum Pitch</td>
<td>NA</td>
</tr>
<tr>
<td>Fuel Oil, Residual</td>
<td>NA</td>
</tr>
<tr>
<td>Catalytic Cracked Clarified Oil</td>
<td>NA</td>
</tr>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>NA</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>NA</td>
</tr>
<tr>
<td>Benz(a)anthracene</td>
<td>NA</td>
</tr>
<tr>
<td>Sulfur Compounds</td>
<td>NA</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>Petroleum Pitch</td>
<td>NA</td>
</tr>
<tr>
<td>Fuel Oil, Residual</td>
<td>NA</td>
</tr>
<tr>
<td>Catalytic Cracked Clarified Oil</td>
<td>NA</td>
</tr>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>= 0.454 kg final RQ&lt;br&gt; = 0.454 kg statutory RQ&lt;br&gt; = 1 lb final RQ&lt;br&gt; = 1 lb statutory RQ&lt;br&gt; = 100 lb final RQ&lt;br&gt; = 45.4 kg final RQ</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>= 0.454 kg final RQ&lt;br&gt; = 0.454 kg statutory RQ&lt;br&gt; = 1 lb final RQ&lt;br&gt; = 1 lb statutory RQ</td>
</tr>
<tr>
<td>Benz(a)anthracene</td>
<td>= 0.454 kg final RQ&lt;br&gt; = 0.454 kg statutory RQ&lt;br&gt; = 1 lb final RQ&lt;br&gt; = 1 lb statutory RQ&lt;br&gt; = 10 lb final RQ&lt;br&gt; = 4.54 kg final RQ</td>
</tr>
<tr>
<td>Sulfur Compounds</td>
<td>NA</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>Petroleum Pitch</td>
<td>None</td>
</tr>
<tr>
<td>Fuel Oil, Residual</td>
<td>None</td>
</tr>
<tr>
<td>Catalytic Cracked Clarified Oil</td>
<td>None</td>
</tr>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>= 100 lb Reporting Threshold listed under &quot;Polycyclic aromatic compounds&quot;, Chemical Category N590, PBT Chemicals</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>= 100 lb Reporting Threshold listed under &quot;Polycyclic aromatic compounds&quot;, Chemical Category N590, PBT Chemicals</td>
</tr>
<tr>
<td>Benz(a)anthracene</td>
<td>= 100 lb Reporting Threshold listed under &quot;Polycyclic aromatic compounds&quot;, Chemical Category N590, PBT Chemicals</td>
</tr>
<tr>
<td>Sulfur Compounds</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:

**Petroleum Pitch**

- 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

**Substances:**

- California - Regulated Carcinogens: Not Listed
- Pennsylvania RTK - Special Hazardous Substances: Not Listed

**New Jersey - Special Hazardous Substances:**

- New Jersey - Environmental Hazardous Substances: Not Listed

**Substances List:**

- Illinois - Toxic Air Contaminants: Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:

Fuel Oil, Residual

Louisiana Right-To-Know: Not Listed
California Proposition 65: Not Listed
New Jersey Right-To-Know: Not Listed
Pennsylvania Right-To-Know: [present]
Massachusetts Right-To Know: Not Listed
Florida substance List: Not Listed
Rhode Island Right-To-Know: Flammable
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:

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:
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:

Indeno(1,2,3-cd)pyrene

Louisiana Right-To-Know: Not Listed
California Proposition 65: Carcinogen; initial date 1/1/88
New Jersey Right-To-Know: sn 3052
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: 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: Carcinogen; extraordinarily hazardous

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New Jersey - Environmental Hazardous Substances List:
SN 3758 (Polycyclic aromatic compounds category); Category Code N590; report 500 lbs. in combination of any listed chemicals
SN 3758; Category Code N590

Illinois - Toxic Air Contaminants
New York - Reporting of Releases Part 597 - List of Hazardous Substances:
= 1 lb Land/Water RQ
= 100 lbs Air RQ

Benzo(a)pyrene
Louisiana Right-To-Know:
California Proposition 65:
New Jersey Right-To-Know:
Pennsylvania Right-To-Know:
Massachusetts Right-To-Know:
Florida substance List:
Rhode Island Right-To-Know:
Michigan critical materials register list:
Massachusetts Extraordinarily Hazardous Substances:
California - Regulated Carcinogens:
Pennsylvania RTK - Special Hazardous Substances:
New Jersey - Special Hazardous Substances:
New Jersey - Environmental Hazardous Substances List:

Illinois - Toxic Air Contaminants
New York - Reporting of Releases Part 597 - List of Hazardous Substances:
= 1 lb Air RQ
= 1 lb Land/Water RQ

Benz(a)anthracene
Louisiana Right-To-Know:
California Proposition 65:
New Jersey Right-To-Know:
Pennsylvania Right-To-Know:
Massachusetts Right-To-Know:
Florida substance List:
Rhode Island Right-To-Know:
Michigan critical materials register list:
Massachusetts Extraordinarily Hazardous Substances:
California - Regulated Carcinogens:
Pennsylvania RTK - Special Hazardous Substances:
New Jersey - Special Hazardous Substances:
New Jersey - Environmental Hazardous Substances List:

Illinois - Toxic Air Contaminants
New York - Reporting of Releases Part 597 - List of Hazardous Substances:
= 1 lb Land/Water RQ
= 10 lbs Air RQ

Sulfur Compounds
Louisiana Right-To-Know:
California Proposition 65:
New Jersey Right-To-Know:
Pennsylvania Right-To-Know:

MSDS ID NO.: 0258MAR019  Product name: Marathon Synfuel Binder - Pitch  Page 10 of 11
Canadian Regulatory Information:

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Canada - WHMIS: Classifications of Substances</th>
<th>Canada - WHMIS:Ingredient Disclosure:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>D2A</td>
<td>0.1% (English Item 871, French Item 1017)</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>D2A</td>
<td>0.1% (English Item 163, French Item 287)</td>
</tr>
<tr>
<td>Benz(a)anthracene</td>
<td>D2A</td>
<td>0.1% (English Item 411, French Item 1721)</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

Additional Information: No data available.

Prepared by: Craig M. Parker Manager, Toxicology and Product Safety

The information and recommendations contained herein are based upon tests believed to be reliable. However, Marathon Petroleum Company LLC (MPC) does not guarantee their accuracy or completeness nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage maybe required. MPC assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

End of Safety Data Sheet