1. Product and Company Identification

Material name: P1 Creosote Oil
Revision date: 08-26-2011
Version #: 01
CAS #: Mixture
Product use: Wood preservative.
Synonym(s): None.
Manufacturer/Supplier: KMG- Bernuth, Inc.
9555 W. Sam Houston Parkway S.
Suite 600
Houston, Texas 77099
Phone Number: 713-600-3800

Emergency:
CHEMTREC: 1-800-424-9300
Emergency medical treatment: 1-800-322-8177

2. Hazards Identification

Physical state: Liquid.
Appearance: Oily, viscous liquid.
Emergency overview:
WARNING
Suspect cancer hazard - may cause cancer. Causes skin, eye and respiratory tract irritation. May be harmful if swallowed. May cause allergic skin reaction.

OSHA regulatory status: This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects:

Routes of exposure:
Eye contact. Skin contact. Inhalation. Ingestion.

Eyes:
Causes eye irritation.

Skin:
Causes skin irritation. May cause allergic skin reaction. May cause photosensitization, evidenced by repeated occurrence of a dermatitic rash on exposure to sunlight.

Inhalation:
Causes respiratory tract irritation. Prolonged exposure is associated with lung cancer and urinary cancer.

Ingestion:
May be harmful if swallowed. Swallowing or vomiting of the liquid may result in aspiration into the lungs.

Target organs:

Chronic effects:
Suspect cancer hazard - may cause cancer. May cause scrotal and bladder cancer. May cause allergic skin reaction. May cause damage to the liver and kidneys. May cause lung damage. May cause blood damage. May cause central nervous system effects. Repeated exposure to coal tar products may increase the risk of more serious skin disorders including a variety of skin cancers. Some skin cancers, such as malignant melanoma, have a high mortality rate. Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure. The coal tar component of this formulation contains polynuclear aromatic hydrocarbon (PAHs).

Signs and symptoms:
Inhalation: May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Eye contact: May cause redness and pain. Chronic exposure may cause conjunctivitis, blepharoconjunctivitis and photophobia. Skin contact: Sensitization. Ingestion may cause nausea, headache and dizziness. Be aware that symptoms of chemical pneumonia (shortness of breath) may occur several hours after exposure.

Potential environmental effects:
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS #</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creosote</td>
<td>8001-58-9</td>
<td>98.5</td>
</tr>
<tr>
<td>Constituted components</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>&lt; 16.15</td>
</tr>
</tbody>
</table>
Phenanthrene  85-01-8  < 14.15
Acenaphthene  83-32-9  < 7.8
Fluoranthenes  206-44-0  < 7.45
Pyrene  129-00-0  < 5.8
Dibenzofuran  132-64-9  < 4.5
Anthracene  120-12-7  < 3.8
1,2-Benzphenanthrene  218-01-9  < 1.5
Benz[a]anthracene  56-55-3  < 1.5
Benzo[b]fluoranthene  205-99-2  0.1 - 1
Benzo[a]pyrene  50-32-8  < 0.4
Benzo[k]fluoranthene  207-08-9  < 0.2
Benzo[j]fluoranthene  205-82-3  < 0.2
1,10-(1,2-Phenylene)pyrene  193-39-5  < 0.1
Quinoline  91-22-5  < 0.06
P-xylene  106-42-3  < 0.02

Composition comments  All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First Aid Measures

First aid procedures
Eye contact  Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention if irritation develops and persists.
Skin contact  Remove contaminated clothes and rinse skin thoroughly with water for at least 15 minutes. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
Inhalation  Move injured person into fresh air and keep person calm under observation. Get medical attention if any discomfort continues.
Ingestion  Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention immediately.

Notes to physician  In case of shortness of breath, give oxygen. Keep victim warm.
General advice  Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties  If strongly heated, the product releases polynuclear aromatic hydrocarbons (PAHs), which include carcinogenic substances.
Extinguishing media  Extinguish with foam, carbon dioxide, dry powder or water fog.
Protection of firefighters
Specific hazards arising from the chemical  Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterized.
Fire fighting equipment/instructions  Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Specific methods  Use standard firefighting procedures and consider the hazards of other involved materials. Caution should be exercised when using water or foam as frothing may occur, especially if directed onto containers of hot or burning material.
6. Accidental Release Measures

Personal precautions
This product must not be heated in a sealed or confined space which has no avenue to allow pressure relief of the expanding vapors. This could cause excessive pressure buildup, blow back of materials, and explosion. Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Stay upwind. Keep people away from and upwind of spill/leak. Ventilate closed spaces before entering. Ensure adequate ventilation. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Avoid inhalation of vapors and contact with skin and eyes. In case of spills, beware of slippery floors and surfaces. Wear suitable protective clothing. See Section 8 of the MSDS for Personal Protective Equipment.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment
Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up
Remove sources of ignition.
Large Spills: Absorb in vermiculite, dry sand or earth and place into containers. Containers with collected spillage must be properly labeled with correct contents and hazard symbol. Collect and dispose of spillage as indicated in section 13 of the MSDS.
Small Spills: Absorb spillage with suitable absorbent material. Collect in containers and seal securely.

Other information
Never return spills in original containers for re-use.
Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling
People working with this product should get instructions before use. This product should only be used in an industrial workplace. Pregnant women should not work with the product, if there is the least risk of exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Avoid inhalation of vapors and contact with skin and eyes. Do not smoke and do not spray near an open flame or other sources of ignition. Vapors are heavier than air and may travel along the floor and in the bottom of containers. Ground container and transfer equipment to eliminate static electric sparks. Observe good industrial hygiene practices.

Storage
Keep away from heat, sparks and open flame. Do not store near heat sources or expose to high temperatures. Store in closed original container in a dry place. Keep in a well-ventilated place. Keep this material away from food, drink and animal feed. Store away from incompatible materials.

8. Exposure Controls / Personal Protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>US. ACGIH Threshold Limit Values</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naphthalene (91-20-3)</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>15 ppm</td>
</tr>
<tr>
<td>P-xylene (106-42-3)</td>
<td>TWA</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)</th>
<th>Type</th>
<th>Value</th>
</tr>
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<tr>
<td>Components</td>
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<td></td>
</tr>
<tr>
<td>Naphthalene (91-20-3)</td>
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<tr>
<td></td>
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<td>50 mg/m³</td>
</tr>
<tr>
<td>P-xylene (106-42-3)</td>
<td>PEL</td>
<td>100 ppm</td>
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<tr>
<td></td>
<td></td>
<td>435 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Canada. Alberta OELs (Occupational Health &amp; Safety Code, Schedule 1, Table 2)</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Components</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naphthalene (91-20-3)</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>15 ppm</td>
</tr>
<tr>
<td>P-xylene (106-42-3)</td>
<td>TWA</td>
<td>52 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>79 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
</tr>
</tbody>
</table>
### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TWA</td>
<td>434 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>651 mg/m³</td>
</tr>
</tbody>
</table>

### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphthalene</td>
<td>TWA</td>
<td>10 ppm</td>
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<tr>
<td></td>
<td>STEL</td>
<td>15 ppm</td>
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<tr>
<td>P-xylene</td>
<td>TWA</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
</tr>
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</table>

### Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphthalene</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>15 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>52 mg/m³</td>
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<tr>
<td></td>
<td>STEL</td>
<td>78 mg/m³</td>
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<tr>
<td>P-xylene</td>
<td>TWA</td>
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</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>650 mg/m³</td>
</tr>
</tbody>
</table>

### Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

<table>
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<tr>
<th>Components</th>
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</thead>
<tbody>
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<td>Benzo[a]pyrene</td>
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<tr>
<td></td>
<td>STEL</td>
<td>15 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>52 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>79 mg/m³</td>
</tr>
<tr>
<td>P-xylene</td>
<td>TWA</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>434 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>651 mg/m³</td>
</tr>
</tbody>
</table>

### Mexico. Occupational Exposure Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphthalene</td>
<td>TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>15 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>50 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>75 mg/m³</td>
</tr>
<tr>
<td>P-xylene</td>
<td>TWA</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>150 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>435 mg/m³</td>
</tr>
<tr>
<td></td>
<td>STEL</td>
<td>655 mg/m³</td>
</tr>
</tbody>
</table>

### Exposure guidelines

No exposure standards allocated.

### Engineering controls

This product must not be heated in a sealed or confined space which has no avenue to allow pressure relief of the expanding vapors. This could cause excessive pressure buildup, blow back of materials, and explosion. Mechanical ventilation or local exhaust ventilation may be required. Use explosion-proof equipment. Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of dust, fumes and vapors. Provide access to washing facilities including soap, skin cleanser and fatty cream.

### Personal protective equipment

#### Eye / face protection

Wear approved safety goggles.

#### Skin protection

Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier. Wear appropriate chemical resistant clothing to prevent any possibility of skin contact.

#### Respiratory protection

If enclosed handling cannot be guaranteed, ventilation and protective clothing must be used. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Use a NIOSH/MSHA approved air purifying respirator as needed to control exposure. Consult with respirator manufacturer to determine respirator selection, use, and limitations. Use positive pressure, air-supplied respirator for uncontrolled releases or when air purifying respirator limitations may be exceeded. Follow respirator protection program requirements (OSHA 1910.134 and ANSI Z88.2) for all respirator use.
General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Launder contaminated clothing before reuse. Remove and isolate contaminated clothing and shoes. Observe any medical surveillance requirements.

9. Physical & Chemical Properties

Appearance
Oily, viscous liquid.

Color
Dark brown.

Odor
Strong aromatic, tar-like.

Odor threshold
Not available.

Physical state
Liquid.

Form
Liquid.

pH
7 - 8

Melting point
Not applicable.

Freezing point
Not applicable.

Boiling point
> 381.2 °F (> 194 °C)

Flash point
> 311 °F (> 155 °C) Pensky-Martens Closed Cup (ASTM D-93)

Evaporation rate
< 1 (Butyl acetate = 1.0)

Flammability limits in air, upper, % by volume
No data available.

Flammability limits in air, lower, % by volume
No data available.

Vapor pressure
13 mm Hg (25°C, Approx.)

Vapor density
> 1 (Air=1)

Specific gravity
1.03 - 1.18

Solubility (water)
Insoluble.

Partition coefficient (n-octanol/water)
Not available.

Auto-ignition temperature
636.8 °F (336 °C)

Decomposition temperature
Not available.

Viscosity
No data available.

Bulk density
8.6 - 9.85 lb/gal

Density
1.03 - 1.18

Percent volatile
475 g/l

10. Chemical Stability & Reactivity Information

Chemical stability
Stable under normal temperature conditions.

Conditions to avoid
Heat, flames and sparks.

Incompatible materials
Strong oxidizing agents. Mixing of chlorosulfonic acid and creosote oil in a closed container can cause an increase in temperature and pressure (NFPA 491M, 1991).

Hazardous decomposition products

Possibility of hazardous reactions
Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Components
Test Results

P-xylene (106-42-3)
Acute Dermal LD50 Rabbit: > 43 g/kg
Acute Inhalation LCL0 Rat: 8000 mg/l 4 Hours
Acute Oral LD50 Rat: 3523 - 8600 mg/kg

Anthracene (120-12-7)
Acute Dermal LD50 Rabbit: > 1320 mg/kg
Acute Oral LD50 Rat: > 16000 mg/kg
Components | Test Results  
--- | ---  
Fluoranthene (206-44-0) | Acute Dermal LD50 Rabbit: 3180 mg/kg  
Creosote (8001-58-9) | Acute Dermal LD50 Rabbit: > 2000 mg/kg  
Naphthalene (91-20-3) | Acute Oral LD50 Rat: 725 mg/kg  
Quinoline (91-22-5) | Acute Dermal LD50 Rabbit: 540 mg/kg  
    | Acute Oral LD50 Rat: 331 mg/kg  

**Acute effects**  
May be harmful if swallowed.

**Local effects**  
Causes skin, eye and respiratory tract irritation.

**US ACGIH Threshold Limit Values: Skin designation**

- Naphthalene (CAS 91-20-3): Can be absorbed through the skin.

**Sensitization**  
May cause allergic skin reaction. May cause photosensitization, evidenced by repeated occurrence of a dermatitic rash on exposure to sunlight.

**Chronic effects**  
The coal tar pitch component of this formulation contains polynuclear aromatic hydrocarbons (PAHs). Some PAHs are recognized carcinogens and may cause skin, lung and bladder cancer. May cause central nervous system effects. May cause damage to the liver and kidneys. May cause lung damage. May cause blood damage. May cause photosensitization, evidenced by repeated occurrence of a dermatitic rash on exposure to sunlight. Pre-existing skin and respiratory conditions including dermatitis, asthma and chronic lung disease might be aggravated by exposure. Chronic exposure may cause conjunctivitis, blepharoconjunctivitis and photophobia.

**Carcinogenicity**  
Suspect cancer hazard. May cause scrotal and bladder cancer. Repeated exposure to coal tar products may increase the risk of more serious skin disorders including a variety of skin cancers. Some skin cancers, such as malignant melanoma, have a high mortality rate.

**ACGIH Carcinogens**

- 1,2-Benzphenanthrene (CAS 218-01-9): A3 Confirmed animal carcinogen with unknown relevance to humans.
- Naphthalene (CAS 91-20-3): A4 Not classifiable as a human carcinogen.
- P-xylene (CAS 106-42-3): A4 Not classifiable as a human carcinogen.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

- 1,10-(1,2-Phenylene)pyrene (CAS 193-39-5): 2B Possibly carcinogenic to humans.
- 1,2-Benzphenanthrene (CAS 218-01-9): 2B Possibly carcinogenic to humans.
- Acenaphthene (CAS 83-32-9): 3 Not classifiable as to carcinogenicity to humans.
- Anthracene (CAS 120-12-7): 3 Not classifiable as to carcinogenicity to humans.
- Benzo[k]fluoranthene (CAS 205-82-3): 2B Possibly carcinogenic to humans.
- Benzo[k]fluoranthene (CAS 207-08-9): 2B Possibly carcinogenic to humans.
- Fluoranthene (CAS 206-44-0): 3 Not classifiable as to carcinogenicity to humans.
- Naphthalene (CAS 91-20-3): 2B Possibly carcinogenic to humans.
- Phenanthrene (CAS 85-01-8): 3 Not classifiable as to carcinogenicity to humans.
- P-xylene (CAS 106-42-3): 3 Not classifiable as to carcinogenicity to humans.
- Pyrene (CAS 129-00-0): 3 Not classifiable as to carcinogenicity to humans.

**US NTP Report on Carcinogens: Anticipated carcinogen**

- 1,10-(1,2-Phenylene)pyrene (CAS 193-39-5): Anticipated carcinogen.
- Benzo[k]fluoranthene (CAS 205-82-3): Anticipated carcinogen.
- Benzo[k]fluoranthene (CAS 207-08-9): Anticipated carcinogen.
- Naphthalene (CAS 91-20-3): Anticipated carcinogen.

**Mutagenicity**  
No data available.
Neurological effects
No data available.

Reproductive effects
No data available.

Symptoms and target organs
Inhalation: May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Eye contact: May cause redness and pain. Skin contact: Sensitization. Ingestion may cause dizziness, nausea and vomiting. Be aware that symptoms of chemical pneumonia (shortness of breath) may occur several hours after exposure.

Further information
Swallowing or vomiting of the liquid may result in aspiration into the lungs.

12. Ecological Information

Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-xylene (106-42-3)</td>
<td>EC50 Water flea (Daphnia magna): 3.55 - 6.31 mg/l 48 hours</td>
</tr>
<tr>
<td>Anthracene (120-12-7)</td>
<td>EC50 Water flea (Daphnia magna): 0.081 - 0.112 mg/l 48 hours</td>
</tr>
<tr>
<td>Pyrene (129-00-0)</td>
<td>LC50 Bluegill (Lepomis macrochirus): 0 - 0.0032 mg/l 96 hours</td>
</tr>
<tr>
<td>Dibenzofuran (132-64-9)</td>
<td>LC50 Fathead minnow (Pimephales promelas): 0.84 - 1.31 mg/l 96 hours</td>
</tr>
<tr>
<td>Fluoranthen (206-44-0)</td>
<td>LC50 Winter flounder (Pleuronectes americanus): 0.0001 - 0.0001 mg/l 96 hours</td>
</tr>
<tr>
<td>Acenaphthene (83-32-9)</td>
<td>EC50 Water flea (Daphnia magna): 1.102 - 1.475 mg/l 48 hours</td>
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<tr>
<td>Phenanthrene (85-01-8)</td>
<td>LC50 Brown trout (Salmo trutta): 0.51 - 0.66 mg/l 96 hours</td>
</tr>
<tr>
<td>Naphthalene (91-20-3)</td>
<td>EC50 Water flea (Daphnia magna): 0.185 - 0.243 mg/l 48 hours</td>
</tr>
<tr>
<td>Quinoline (91-22-5)</td>
<td>LC50 Fathead minnow (Pimephales promelas): 0.12 - 1.32 mg/l 96 hours</td>
</tr>
</tbody>
</table>

Ecotoxicity
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Persistence and degradability
No data available.

Bioaccumulation / Accumulation
No data available.

Partition coefficient (n-octanol/water)
Not available.

Mobility in environmental media
The product is slightly soluble in water.

13. Disposal Considerations

Waste codes
U051: Waste Creosote

Disposal instructions
Dispose of this material and its container at hazardous or special waste collection point. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.

Waste from residues / unused products
Dispose of in accordance with local regulations.

Contaminated packaging
Empty containers should be taken to an approved waste handling site for recycling or disposal.
### 14. Transport Information

#### DOT

<table>
<thead>
<tr>
<th>Basic shipping requirements:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>UN number</td>
<td>UN3082</td>
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<tr>
<td>Proper shipping name</td>
<td>Environmentally hazardous substances, liquid, n.o.s. (Naphthalene RQ = 1203 LBS, Anthracene RQ = 256237 LBS)</td>
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<tr>
<td>Hazard class</td>
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<tr>
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<td>Packaging bulk</td>
<td>241</td>
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#### IATA

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<tbody>
<tr>
<td>UN number</td>
<td>3082</td>
</tr>
<tr>
<td>Proper shipping name</td>
<td>Environmentally hazardous substance, liquid, n.o.s. (Naphthalene, Anthracene)</td>
</tr>
<tr>
<td>Hazard class</td>
<td>9</td>
</tr>
<tr>
<td>Packing group</td>
<td>III</td>
</tr>
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<td>Environmental hazards</td>
<td></td>
</tr>
<tr>
<td>Marine pollutant</td>
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<tr>
<td>Additional information:</td>
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#### IMDG

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<td>3082</td>
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<tr>
<td>Proper shipping name</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Naphthalene, Anthracene)</td>
</tr>
<tr>
<td>Hazard class</td>
<td>9</td>
</tr>
<tr>
<td>Packing group</td>
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<tr>
<td>Environmental hazards</td>
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</tr>
<tr>
<td>Marine pollutant</td>
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<td>EmS No.</td>
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#### TDG

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<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Naphthalene, Anthracene)</td>
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<tr>
<td>Hazard class</td>
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<td>UN number</td>
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<td>Packing group</td>
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<tr>
<td>Marine pollutant</td>
<td>Yes</td>
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<tr>
<td>Additional information:</td>
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<tr>
<td>Special provisions</td>
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**General**

Read safety instructions, MSDS and emergency procedures before handling.

### 15. Regulatory Information

#### US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Section 12(b) Export Notification(40 CFR 707, Subpt. D)**

<table>
<thead>
<tr>
<th>Substance</th>
<th>%</th>
<th>Export Notification</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAPHTHALENE (CAS 91-20-3)</td>
<td>0.1 %</td>
<td>One-Time Export Notification only.</td>
</tr>
<tr>
<td>P-XYLENE (CAS 106-42-3)</td>
<td>1.0 %</td>
<td>One-Time Export Notification only.</td>
</tr>
</tbody>
</table>

**US CAA Section 112 Hazardous Air Pollutants (HAPs) List**

<table>
<thead>
<tr>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIBENZOFURANS (CAS 132-64-9)</td>
</tr>
<tr>
<td>NAPHTHALENE (CAS 91-20-3)</td>
</tr>
<tr>
<td>POLYCYCLIC ORGANIC MATTER (CAS 120-12-7)</td>
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</tbody>
</table>
POLYCYCLIC ORGANIC MATTER (CAS 129-00-0)
POLYCYCLIC ORGANIC MATTER (CAS 193-39-5)
POLYCYCLIC ORGANIC MATTER (CAS 205-82-3)
POLYCYCLIC ORGANIC MATTER (CAS 205-99-2)
POLYCYCLIC ORGANIC MATTER (CAS 206-44-0)
POLYCYCLIC ORGANIC MATTER (CAS 207-08-9)
POLYCYCLIC ORGANIC MATTER (CAS 218-01-9)
POLYCYCLIC ORGANIC MATTER (CAS 50-32-8)
POLYCYCLIC ORGANIC MATTER (CAS 56-55-3)
POLYCYCLIC ORGANIC MATTER (CAS 83-32-9)
POLYCYCLIC ORGANIC MATTER (CAS 85-01-8)
P-XYLENES (CAS 106-42-3)
QUINOLINE (CAS 91-22-5)

**US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Spill: Reportable quantity**

Pyrene (CAS 129-00-0) 5000 LBS

**US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Substance: Threshold planning quantity, lower value**

Pyrene (CAS 129-00-0) 1000 LBS

**US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Substance: Threshold planning quantity, upper value**

Pyrene (CAS 129-00-0) 10000 LBS

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration**

1,10-(1,2-Phenylene)pyrene (CAS 193-39-5) 0.1 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

1,2-Benzphenanthrene (CAS 218-01-9) 1.0 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Anthracene (CAS 120-12-7) 1.0 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Benzo[a]anthracene (CAS 56-55-3) 0.1 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Benzo[a]pyrene (CAS 50-32-8) 0.1 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Benzo[b]fluoranthene (CAS 205-99-2) 0.1 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Benzo[j]fluoranthene (CAS 205-82-3) 0.1 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Benzo[k]fluoranthene (CAS 207-08-9) 0.1 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Creosote (CAS 8001-58-9) 0.1 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Dibenzofuran (CAS 132-64-9) 1.0 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Fluoranthene (CAS 206-44-0) 1.0 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Naphthalene (CAS 91-20-3) 0.1 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Phenanthrene (CAS 85-01-8) 1.0 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

P-xylene (CAS 106-42-3) 1.0 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

Quinoline (CAS 91-22-5) 1.0 % Substance is not eligible for the de minimis exemption except for the purposes of supplier notification requirements.

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Reportable threshold**

1,10-(1,2-Phenylene)pyrene (CAS 193-39-5) 100 LBS

1,2-Benzphenanthrene (CAS 218-01-9) 100 LBS

Anthracene (CAS 120-12-7) 100 LBS

Benzo[a]anthracene (CAS 56-55-3) 100 LBS

Benzo[a]pyrene (CAS 50-32-8) 100 LBS

Benzo[b]fluoranthene (CAS 205-99-2) 100 LBS

Benzo[j]fluoranthene (CAS 205-82-3) 100 LBS

Benzo[k]fluoranthene (CAS 207-08-9) 100 LBS

Fluoranthene (CAS 206-44-0) 100 LBS

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

1,10-(1,2-Phenylene)pyrene (CAS 193-39-5) Listed.

1,2-Benzphenanthrene (CAS 218-01-9) Listed.

Anthracene (CAS 120-12-7) Listed.

Benzo[a]anthracene (CAS 56-55-3) Listed.


Benzo[b]fluoranthene (CAS 205-99-2) Listed.

Benzo[j]fluoranthene (CAS 205-82-3) Listed.

Benzo[k]fluoranthene (CAS 207-08-9) Listed.

Creosote (CAS 8001-58-9) Listed.

Dibenzofuran (CAS 132-64-9) Listed.

Fluoranthene (CAS 206-44-0) Listed.
Naphthalene (CAS 91-20-3) Listed.
Phenanthrene (CAS 85-01-8) Listed.
P-xylene (CAS 106-42-3) Listed.
Quinoline (CAS 91-22-5) Listed.

CERCLA (Superfund) reportable quantity (lbs) (40 CFR 302.4)
Creosote: 1
Naphthalene: 100
Phenanthrene: 5000
Acenaphthene: 100
Fluorantheme: 100
Pyrene: 5000
Dibenzofuran: 100
Antracene: 5000
1,2-Benzphenanthrene: 100
Benz[a]anthracene: 10
Benzo[b]fluoranthene: 1
Benzo[a]pyrene: 1
Benzo[k]fluoranthene: 5000
1,10-(1,2-Phenylenepyrene: 100
Quinoline: 5000
P-xylene: 100

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance (40 CFR 355, Appendix A)
No

Section 311/312 (40 CFR 370)
Yes

Drug Enforcement Administration (DEA) (21 CFR 1308.11-15)
Not controlled

Canadian regulations
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS status
Controlled

WHMIS classification
D2A - Other Toxic Effects-VERY TOXIC

Inventory status

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
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<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
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</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
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<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
</tbody>
</table>
Country(s) or region | Inventory name | On inventory (yes/no)*
--- | --- | ---
United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations:

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

**US - California Hazardous Substances (Director's): Listed substance**

1,10-(1,2-Phenylene)pyrene (CAS 193-39-5) Listed.
1,2-Benzphenanthrene (CAS 218-01-9) Listed.
Acenaphthene (CAS 83-32-9) Listed.
Anthracene (CAS 120-12-7) Listed.
Benz[a]anthracene (CAS 56-55-3) Listed.
Benzo[b]fluoranthene (CAS 205-99-2) Listed.
Benzo[j]fluoranthene (CAS 205-82-3) Listed.
Benzo[k]fluoranthene (CAS 207-08-9) Listed.
Creosote (CAS 8001-58-9) Listed.
Fluoranthene (CAS 206-44-0) Listed.
Naphthalene (CAS 91-20-3) Listed.
Phenanthrene (CAS 85-01-8) Listed.
P-xylene (CAS 106-42-3) Listed.
Pyrene (CAS 129-00-0) Listed.
Quinoline (CAS 91-22-5) Listed.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

1,10-(1,2-Phenylene)pyrene (CAS 193-39-5) Listed: January 1, 1988 Carcinogenic.
1,2-Benzphenanthrene (CAS 218-01-9) Listed: January 1, 1990 Carcinogenic.
Benzo[j]fluoranthene (CAS 205-82-3) Listed: July 1, 1987 Carcinogenic.
Benzo[k]fluoranthene (CAS 207-08-9) Listed: July 1, 1987 Carcinogenic.
Naphthalene (CAS 91-20-3) Listed: April 19, 2002 Carcinogenic.

**US - Massachusetts RTK - Substance: Listed substance**

1,10-(1,2-Phenylene)pyrene (CAS 193-39-5) Listed.
1,2-Benzphenanthrene (CAS 218-01-9) Listed.
Acenaphthene (CAS 83-32-9) Listed.
Anthracene (CAS 120-12-7) Listed.
Benz[a]anthracene (CAS 56-55-3) Listed.
Benzo[b]fluoranthene (CAS 205-99-2) Listed.
Benzo[j]fluoranthene (CAS 205-82-3) Listed.
Benzo[k]fluoranthene (CAS 207-08-9) Listed.
Creosote (CAS 8001-58-9) Listed.
Dibenzofuran (CAS 132-64-9) Listed.
Fluoranthene (CAS 206-44-0) Listed.
Naphthalene (CAS 91-20-3) Listed.
Phenanthrene (CAS 85-01-8) Listed.
P-xylene (CAS 106-42-3) Listed.
Pyrene (CAS 129-00-0) Listed.
Quinoline (CAS 91-22-5) Listed.
US - New Jersey Community RTK (EHS Survey): Reportable threshold

- 1,10-(1,2-Phenylene)pyrene (CAS 193-39-5) 500 LBS
- 1,2-Benzphenanthrene (CAS 218-01-9) 500 LBS
- Anthracene (CAS 120-12-7) 500 LBS
- Benz[a]anthracene (CAS 56-55-3) 500 LBS
- Benzo[a]pyrene (CAS 50-32-8) 500 LBS
- Benzo[b]fluoranthene (CAS 205-99-2) 500 LBS
- Benzo[j]fluoranthene (CAS 205-82-3) 500 LBS
- Benzo[k]fluoranthene (CAS 207-08-9) 500 LBS
- Creosote (CAS 8001-58-9) 500 LBS
- Dibenzofuran (CAS 132-64-9) 500 LBS
- Fluoranthene (CAS 206-44-0) 500 LBS
- Naphthalene (CAS 91-20-3) 500 LBS
- Phenanthrene (CAS 85-01-8) 500 LBS
- P-xylene (CAS 106-42-3) 500 LBS
- Pyrene (CAS 129-00-0) 500 LBS
- Quinoline (CAS 91-22-5) 500 LBS

US - New Jersey RTK - Substances: Listed substance

- 1,10-(1,2-Phenylene)pyrene (CAS 193-39-5) Listed.
- 1,2-Benzphenanthrene (CAS 218-01-9) Listed.
- Acenaphthene (CAS 83-32-9) Listed.
- Anthracene (CAS 120-12-7) Listed.
- Benz[a]anthracene (CAS 56-55-3) Listed.
- Benzo[b]fluoranthene (CAS 205-99-2) Listed.
- Benzo[j]fluoranthene (CAS 205-82-3) Listed.
- Benzo[k]fluoranthene (CAS 207-08-9) Listed.
- Dibenzofuran (CAS 132-64-9) Listed.
- Fluoranthene (CAS 206-44-0) Listed.
- Naphthalene (CAS 91-20-3) Listed.
- Phenanthrene (CAS 85-01-8) Listed.
- P-xylene (CAS 106-42-3) Listed.
- Pyrene (CAS 129-00-0) Listed.
- Quinoline (CAS 91-22-5) Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

- 1,10-(1,2-Phenylene)pyrene (CAS 193-39-5) Listed.
- 1,2-Benzphenanthrene (CAS 218-01-9) Listed.
- Acenaphthene (CAS 83-32-9) Listed.
- Anthracene (CAS 120-12-7) Listed.
- Benz[a]anthracene (CAS 56-55-3) Listed.
- Benzo[b]fluoranthene (CAS 205-99-2) Listed.
- Benzo[j]fluoranthene (CAS 205-82-3) Listed.
- Benzo[k]fluoranthene (CAS 207-08-9) Listed.
- Dibenzofuran (CAS 132-64-9) Listed.
- Fluoranthene (CAS 206-44-0) Listed.
- Naphthalene (CAS 91-20-3) Listed.
- Phenanthrene (CAS 85-01-8) Listed.
- P-xylene (CAS 106-42-3) Listed.
- Pyrene (CAS 129-00-0) Listed.
- Quinoline (CAS 91-22-5) Listed.

US - Pennsylvania RTK - Hazardous Substances: Special hazard

- 1,10-(1,2-Phenylene)pyrene (CAS 193-39-5) Special hazard.
- Benz[a]anthracene (CAS 56-55-3) Special hazard.
- Benzo[a]pyrene (CAS 50-32-8) Special hazard.
- Benzo[b]fluoranthene (CAS 205-99-2) Special hazard.
- Benzo[j]fluoranthene (CAS 205-82-3) Special hazard.
- Benzo[k]fluoranthene (CAS 207-08-9) Special hazard.
- Creosote (CAS 8001-58-9) Special hazard.

Mexico regulations This safety data sheet was prepared in accordance with the Official Mexican Standard (NOM-018-STPS-2000).
16. Other Information

Further information
HMIS® is a registered trade and service mark of the NPCA.
H - Goggles, Gloves, Apron, Vapor Respirator

HMIS® ratings
Health: 2*
Flammability: 1
Physical hazard: 0
Personal protection: H

NFPA ratings
Health: 2
Flammability: 1
Instability: 0

Disclaimer
NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this (M)SDS.

Issue date
08-26-2011