Material Safety Data Sheet

Section 1: Chemical Product and Company Information

Product name: Asphaltene Pitch
Supplier/ Further Information: Martrex, Inc.
   1107 Hazeltine Blvd,
   Suite 535 MD 27,
   Chaska, Minnesota 55318
   Phone: 952/933-5000
   Toll Free: 800/328-3627
   FAX: 952/933-1889
EPA Registration Number: n/a
CAS#: 64742-16-1
Chemical Name: Petroleum Asphalt
Synonyms: Petroleum Pitch, Asphaltene Pitch, Asphalt
Chemical Family: Petroleum Hydrocarbon
MSDS Number: n/a
24 Hour Emergency Phone - Chemtrec Transport: 1-800-424-9300; Medical: 1-800-441-3637

Section 2: Composition/Information on Ingredients

<table>
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<tr>
<th>Hazardous Component</th>
<th>CAS#</th>
<th>%</th>
<th>OSHA PEL</th>
<th>OSHA STEL</th>
<th>OSHA CEIL</th>
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<tbody>
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<td>Petroleum Asphalt</td>
<td>64742-16-1</td>
<td>100%</td>
<td>5 mg/m³</td>
<td>n/a</td>
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<tr>
<td>OTHER LIMITS</td>
<td>RTECS#</td>
<td>ACGIH TLV</td>
<td>ACGIH STEL</td>
<td>ACGIH CEIL</td>
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<tr>
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<td>5 mg/m³</td>
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</tbody>
</table>

Section 3: Hazards Identification

Emergency Overview: CAN CAUSE RESPIRATORY, EYE, OR SKIN IRRITATION. CAN CAUSE THERMAL BURN. Avoid breathing dust or fumes. Use ventilation adequate to keep dust or fumes below recommended exposure limits. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling..

NFPA: Health: 0 Fire: 1 Instability: 0

HEALTH:
Primary Routes of Exposure / Entry: Skin, Inhalation
Acute Exposure Symptoms
  Inhalation: Dust / fumes may cause headache, nasal and respiratory irritation, nausea, and drowsiness.
  Eye Contact: Irritation. Hot material can cause thermal burn.
  Skin Contact: Irritation. Hot material can cause thermal burn.
Ingestion: Irritation. Hot material may cause thermal burn
Chronic Exposure Symptoms
  Inhalation: Dust / fumes may cause respiratory irritation.
  Eye Contact: Redness, thermal burn
  Skin Contact: Drying, cracking, redness, itching, burning, or inflammation of skin (Dermatitis).
Aggravated Medical Conditions: Pre-existing dermatitis and respiratory condition.

24 Hour Emergency Phone - Chemtrec: 1-800-424-9300 Transportation 1-800-441-3637 Medical
Section 4: First Aid Measures

**Inhalation:** Remove exposed person to fresh air. If breathing has stopped, perform artificial respiration. Get medical attention promptly.

**Eye Exposure:** Immediately flush eyes for a minimum of 15 minutes, occasionally lifting the lower and upper lids. Get medical attention promptly.

**Skin Exposure:** Immediately remove soiled clothing and wash skin with soap and water. Launder clothing before wearing again. Get medical attention promptly if irritation or burn occurs.

**Ingestion:** Drying, cracking, redness, itching, burning, or inflammation of skin (Dermatitis). Pre-existing dermatitis and respiratory condition.

**Note to Physician:** n/a

Section 5: Fire Fighting Measures

**Flash Point:** >550°F / COC Auto-ignition: 905°F

**Lower explosion limit:** n/a

**Upper explosion limit:** n/a

**Extinguishing Media:** Use dry chemical or carbon dioxide as extinguishing media. Water or foam may cause frothing. Use water to keep fire exposed containers cool.

**Personal Protective Equipment:** Self-contained breathing apparatus with positive pressure; other protective equipment is necessary, if entering enclosed or confined space.

**Unusual Fire and Explosive Hazards:** When strong oxidizers are present (NFPA Class III B Combustible). Material is incompatible with strong acids and caustics; strong oxidizers enhance fire hazard.

**Special Procedures:** Do not enter enclosed or confined space without a self-contained breathing apparatus and other protective equipment.

**Hazardous Decomposition Materials (under fire conditions):** Products of combustion may contain carbon dioxide, carbon monoxide, and various hydrocarbon compounds.

Section 6: Accidental Release Measures

Evacuation procedures and Safety:

**Containment of Spill:** SMALL SPILLS: Place into containers for later disposal. LARGE SPILLS: If liquid, contain spill immediately in smallest possible area (ex. earthen dikes). Control ignition sources around spill area. Nonrecoverable product, contaminated soil, debris and other materials should be placed in proper containers for ultimate disposal. Avoid washing, draining or directing materials to sanitary sewers.

**Cleanup and Disposal of Spill:** Recycle as much of the recoverable product as possible. It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal. Treatment, storage, transportation and disposal must be in accordance with applicable federal, state, and local regulations.

**Environmental and Regulatory Reporting:** Cleanup, Dispose and report in accordance with all applicable local, state, and federal environmental regulations.

Section 7: Handling and Storage

**Minimum/maximum Storage Temperature:** n/a

**Handling:** While loading, unloading, tank gauging, etc., remain upwind. Request assistance of safety and industrial hygiene personnel to determine air concentrations.

**Storage:** Keep container tightly closed and away from ignition sources and strong oxidizers (NFPA Class III B Combustible). Do not store with strong oxidizers. Store in accordance with all applicable local, state and federal environmental regulations.
Section 8: Exposure Controls / Personal Protection

Ventilation Protection: Use sufficient ventilation to maintain air concentrations below regulatory limits. Select appropriate NIOSH approved respiratory protection where necessary (determined by potential exposure and published respiratory protection factors). For unknown concentration or fire fighting use self-contained breathing apparatus with positive pressure.

Respiratory Protection (specify type): Select appropriate NIOSH approved respiratory protection where necessary (determined by potential exposure and published respiratory protection factors). For unknown concentration or fire fighting use self-contained breathing apparatus with positive pressure.

Eye Protection: Safety glasses, chemical goggles or face shield as appropriate.

Skin Protection: Gloves, long-sleeved shirt, and cuff-less trousers to protect from heated asphalt

Other Protective Clothing and Equipment:
- Wear clean body-covering clothing


Section 9: Physical and Chemical Properties

Chemical Name: Petroleum Asphalt
Color and Appearance: Black Beads
Odor: Slight asphalt smell
pH: n/a
Specific Gravity: (60/60F; H$_2$O=1): 1-1.25
 Vapor Density: (Air=1): n/a
Vapor Pressure, Reid (100F): Nil
Volatile by Volume: <1%
Boiling Point: >1200ºF
Softening Point, C(F): 200-400ºF
Melting Point: n/a
Evaporation Rate: (Butyl Acetate=1): n/a
Solubility in water (% by weight): Negligible
Chemical Formula: n/a
Formula Wt: n/a

Section 10: Stability and Reactivity

Chemical Stability: Stable  X  Unstable
Hazardous Polymerization: May Occur  X
Will Not Occur
Conditions to Avoid: Keep container tightly closed and away from ignition sources and strong oxidizers (NFPA Class III B Combustible). Do not store with strong oxidizers. Store in accordance with all applicable local, state and federal environmental regulations.

Chemical Incompatibility: Avoid and strong acids and oxidizers.

Hazardous Decomposition Products: Products of combustion may contain carbon dioxide, carbon monoxide, and various hydrocarbon compounds.
Section 11: Toxicological Information

Acute Data
- Eye Irritation: n/a
- Skin Irritation: n/a
- Oral LD$_{50}$: n/a
- Dermal LD$_{50}$: n/a
- Inhalation LC$_{50}$: n/a
- Skin Sensitization: n/a

Chronic Data
- Chronic Toxicity Studies: n/a
- Mutagenicity Data: n/a
- Reproductive and Teratological Data: n/a
- Carcinogenicity Data:
  - NTP: No
  - OSHA: No
  - IARC Monograph: No
  - Not Listed:

Section 12: Ecological Information

Eco-acute Toxicity: n/a
Environmental Fate: n/a

Section 13: Disposal Considerations

Disposal Procedures: Recycle as much of the recoverable product as possible. It is the responsibility of the user to determine if the material is a hazardous waste at the time of disposal. Treatment, storage, transportation and disposal must be in accordance with applicable federal, state, and local regulations.

Section 14: Transport Information

Domestic (D.O.T.): Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)
International (T.M.O.): Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)
AIR (I.C.A.O.): Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)
Hazard Identification Number: Not Applicable
Placard: Not Applicable
UN number: n/a
Special Information: n/a
Packing Group: n/a

Section 15: Regulatory Information

Workplace Classifications
SARA Title 3
Section 313 Toxic Chemicals:
- S$_{3}$Sb$_{2}$: No
- Na$_{2}$SO$_{4}$: Yes, contains Sodium Sulfate
  - Generic class removed from CFR 7-9-91.
Section 311 Hazard Categories
- Sudden Pressure Release: No
- Fire Hazard: No
- Acute (Immediate Health Hazard): Yes
- Chronic (Delayed Health Hazard): Yes
Section 304 - Extremely Hazardous Substances: Not Applicable
TOXIC SUBSTANCES CONTROL ACT (TSCA), 40 CFR 710: This material is listed on the TSCA inventory of chemical substances.

24 Hour Emergency Phone - Chemtrec: 1-800-424-9300  Transportation
1-800-441-3637  Medical
RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261: This material is not listed but may be subject to characteristic testing if discarded or spilled. If it tests hazardous, 40 CFR 262-266 and 268 may apply.

CLEAN WATER ACT (CWA), Section 311(b)(4): The discharges of crude oil and petroleum products that may cause a film or sheen upon or discoloration of the water surface or adjoining shoreline must be immediately reported to the National Response Center (1-800-424-8802).

Comprehensive Environmental Response, Compensation & Liability Act (CERCLA), SECTION 102: Hazardous Substances: Petroleum and petroleum fractions are currently excluded from the list of CERCLA hazardous substances by Section 101 (14).

Section 16: Other Information

MSDS Issue Date: 02-20-09
Revised Date: n/a
Supersedes: n/a

Disclaimer: The information published in this Material Safety Data Sheet has been compiled from our experience and data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and assume no liability resulting from its use. We reserve the right to revise Material Safety Data Sheets periodically as new information becomes available.