

# MATERIAL SAFETY DATA SHEET

## PERMA COAT 250

### 1. Product And Company Identification

#### Supplier

Asphalt Materials, Inc.  
5400 West 86th Street  
Indianapolis, IN 46268

Company Contact: Douglas A. Lozier  
Telephone Number: (317) 872-6010  
E-Mail: doug.lozier@asphalt-materials.com

#### Manufacturer

Asphalt Materials, Inc.  
5400 West 86th Street  
Indianapolis, IN 46268

Company Contact: Douglas A. Lozier  
Telephone Number: (317) 872-6010  
E-Mail: doug.lozier@asphalt-materials.com

#### Supplier Emergency Contacts & Phone Number

CHEMTREC: (800) 424-9300  
Safety Office: (317) 875-4670

#### Manufacturer Emergency Contacts & Phone Number

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Issue Date: 05/07/2007

Product Name: PERMA COAT 250

Chemical Family: Complex Petroleum Hydrocarbon Mixture

MSDS Number: 463

#### Synonyms

CUTBACK ASPHALT  
MODIFIED MC-250

### 2. Composition/Information On Ingredients

Ingredient Name	CAS Number		Percent Of Total Weight
ADDITIVES A, Proprietary, Non-hazardous	TSCA Listed		0 - 1
ANTISTRIP, Proprietary	Mixture		0 - 5
No. 2 FUEL OIL	68334-30-5		0 - 30
PETROLEUM ASPHALT	8052-42-4	>	65

Asphalt: Asphalt is a complex mixture of high molecular weight hydrocarbons produced from crude petroleum. Composition varies depending on the source of crude and the specifications of the final product.

ACGIH: The American Conference of Governmental Industrial Hygienists recommends an exposure limit of 0.5 mg/m<sup>3</sup> as benzene-extractable inhalable particulate (or equivalent method) to avoid irritation of the conjunctive mucous membranes. Historical information on exposure of asphalt workers used methods different than recommended by ACGIH, so comparisons to the recommended exposure limits are not known.

Hydrogen Sulfide: Trace amounts of Hydrogen Sulfide may be present as a naturally occurring constituent in the petroleum stream and are not added separately to the product.

### 3. Hazards Identification

#### Eye Hazards

Contact with hot cutback asphalt can cause thermal burns to the eyes. Prolonged exposure to vapors, fumes, or mists may cause irritation, redness, and tearing.

#### Skin Hazards

Contact with hot cutback asphalt can cause thermal burns. Prolonged exposure to vapors, fumes, or mists may cause irritation and redness.

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### 3. Hazards Identification - Continued

#### **Ingestion Hazards**

Ingestion is not likely. Ingestion may cause thermal burns. If ingestion of molten material occurs, keep victim's head below their hips to prevent asphalt from reaching the lungs. Take the victim to obtain medical assistance immediately.

#### **Inhalation Hazards**

Breathing vapors, fumes, or mists may cause irritation to nasal and respiratory tract and central nervous system effects. Symptoms may include labored breathing, sore throat, coughing, wheezing, headache, and nausea. Some asphalts may contain sulfur compounds which may form Hydrogen Sulfide when heating.

Hydrogen Sulfide is irritating to the eyes and respiratory tract at low concentrations.

0.02 ppm	odor threshold
10 ppm	eye irritation
100 ppm	headache, dizziness, vomiting, coughing
200-300 ppm	eye inflammation, respiratory tract irritation after 1 hour exposure
700-900 ppm	rapid loss of consciousness, death can result.
>1000 ppm	unconsciousness in seconds, death in minutes unless victim is removed from contaminated area and breathing is restored.

Do not depend on sense of smell for warning. Hydrogen Sulfide causes rapid olfactory fatigue (deadens sense of smell). There is no evidence that hydrogen sulfide will accumulate in body tissue after repeated exposure.

### 4. First Aid Measures

#### **Eye**

Gently flush immediately with cold water for 15 minutes. Do not attempt to remove solidified material from the eye, as this may further injury. Take the victim to obtain medical assistance.

#### **Skin**

Hot Molten Material - Cool the affected body parts immediately by submerging in cold water until the material has cooled. Do not attempt to remove solidified material from the burn area as this may further tissue damage. Take the victim to obtain medical assistance immediately.

Cold Material - Remove cold asphalt by soaking dressing in mineral oil and place over affected area for 2-3 hours. If irritation occurs, call a physician.

Never try to remove the material with solvents.

#### **Ingestion**

Ingestion is not likely. If large amounts are swallowed, do not induce vomiting and immediately call a physician.

#### **Inhalation**

If irritation occurs from inhalation overexposure, immediately remove victim from source to fresh air and seek medical attention.

### 5. Fire Fighting Measures

**Flash Point:** >120 °F

**Flash Point Method:** ASTM D-92

**Autoignition Point:** >410 °F

**Lower Explosive Limit:** 0.7

**Upper Explosive Limit:** 7.5

#### **Fire And Explosion Hazards**

May produce severe burns on contact.

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## PERMA COAT 250

### 5. Fire Fighting Measures - Continued

#### Fire And Explosion Hazards - Continued

May produce hydrogen sulfide (H<sub>2</sub>S) gas in confined spaces or closed containers.

Vapors can explode.

Cutback Asphalts at elevated temperatures may be above their flashpoints and therefore extremely flammable.

#### Extinguishing Media

Foam, Carbon Dioxide, Dry Chemical, and Water Spray may all be suitable in extinguishing fires involving this product.

#### Fire Fighting Instructions

Avoid using water streams to prevent frothing. Use water spray to cool exposed surfaces.

### 6. Accidental Release Measures

Stop source of leak. Eliminate sources of ignitions. Contain by diking or impounding. Absorbants can be used to contain spill. After containment, cutback asphalt can be collected for disposal. Advise authorities if product has entered a sewer or water source. Assure conformity with local, state, and federal governmental regulations for disposal.

### 7. Handling And Storage

#### Handling And Storage Precautions

When opening covers and outlet cap on storage tanks, use faceshield and gloves to avoid possible injury from pressurized asphalt. Hydrogen sulfide can be generated and accumulated in storage tanks and bulk transport compartments. Stay upwind and vent storage hatches before unloading. Keep heating units and flues in storage tanks covered with at least 12 inches of asphalt. Do not overheat.

**HOT FLASH WARNING:** Studies have shown that relatively low flash point substances such as low boiling hydrocarbons and hydrogen sulfide, may accumulate in the vapor space of hot storage tanks and bulk transport compartments. Such vapors may exhibit high flammability characteristics when stored above their flash point. As a precaution, keep ignition sources away from vents and openings. Asphalt Institute publication IS-180 contains further information and guidance of the safe storage and handling of asphalt primes.

**EMPTY CONTAINER WARNING:** Empty containers retain residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

Hot material (above 212° F) contact with water results in a violent expansion as water turns to steam. This can lead to a dangerous boil over and a pressurized container or cargo tank, which can cause damage, rupture of the container or cargo tank, and thermal burn injuries. Never load hot asphalt product into cargo tanks with water condensation or emulsion residue from previous load without servicing the cargo tank. Keep away from incompatible materials.

#### Work/Hygienic Practices

Skin contact and the breathing of mists, fumes, or vapors should be reduced to a minimum to avoid any ill effects. Thoroughly wash exposed skin areas after work to avoid dermatitis. Consider the use of lanolin skin treatments before handling or working around asphalt mixtures.

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### 8. Exposure Controls/Personal Protection

#### **Engineering Controls**

Local or general exhaust required if in an enclosed area to remain below the TLV. If work place exposure limits are exceeded, a NIOSH/MSHA approved air supplied respirator is advised in the absence of proper environmental engineering controls.

#### **Eye/Face Protection**

Safety glasses or chemical splash goggles with faceshield if splashing is anticipated.

#### **Skin Protection**

Insulated, oil impervious gloves (hot asphalt)/Cloth Gloves (cold asphalt). Long sleeve shirts and long pants should be worn at all times around hot asphalt to prevent thermal burns.

#### **Respiratory Protection**

Respiratory protection is not normally required under normal conditions and adequate ventilation. If high vapors are expected, use respirator approved for organic vapors. Observe respirator protection factor criteria cited in ANSI Z88.2 (1980) and other OSHA requirements found in 29 CFR 1910.134. Use air-supplied respirators or self-contained breathing apparatus for firefighting and in confined spaces when asphalt vapor or Hydrogen Sulfide gas exceeds permissible limits.

#### **Other/General Protection**

Wear body-covering clothes to avoid prolonged or repeated exposure. Launder before reuse.

#### **Ingredient(s) - Exposure Limits**

ADDITIVES A, Proprietary, Non-hazardous

OSHA PEL: Not established for this material.

ANTISTRIP, Proprietary

OSHA PEL: Not established for this material.

No. 2 FUEL OIL

OSHA PEL: Not established for this material.

PETROLEUM ASPHALT

OSHA PEL: Not established for this material.

ACGIH TLV: 0.5 mg/m<sup>3</sup> as benzene-extractable inhalable particulate (or equivalent method).

NIOSH REL: 5.0 mg/m<sup>3</sup> as a 15-minute ceiling limit measured as total particulates

### 9. Physical And Chemical Properties

#### **Appearance**

Black/Brown Liquid

#### **Odor**

Characteristic Asphalt Odor

**Chemical Type:** Mixture

**Physical State:** Liquid

**Boiling Point:** 350 °F

**Specific Gravity:** 0.87-0.96

**Molecular Weight:** 300

**Vapor Pressure:** 5-50 mm Hg @ 100 F

**Solubility:** Negligible

### 10. Stability And Reactivity

**Stability:** Stable

**Hazardous Polymerization:** Will not occur.

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### 10. Stability And Reactivity - Continued

#### Incompatible Materials

Strong Oxidizers

#### Hazardous Decomposition Products

Fumes, Smoke, Carbon Monoxide, Hydrogen Sulfide, Sulfur Dioxide, Aldehydes, and Hydrocarbons

### 11. Toxicological Information

**ASPHALT:** The International Agency for Research on Cancer has determined that there is sufficient evidence for the carcinogenicity of extracts of steam-refined bitumens, air-refined bitumens and pooled mixtures of steam- and air-refined bitumens in experimental animals. However, this product does not use extracts in its formulation. Asphalt products, properly handled as outlined in this MSDS, are not expected to cause cancer in humans. Skin contact, breathing of mists, fumes, or vapors should be reduced to a minimum to avoid any ill effects. Chronic health effects would not be expected as long as good hygiene and proper safety precautions are practiced.

#### **Health Hazard Characterization:**

Uncertainties exist in the hazard characterization of asphalt fumes by many factors including its chemical complexity, limitation of the information, the inclusion of coal tar in asphalts in past decades, other confounders and mixed results of human studies. **Concise International Chemical Assessment Documents** relating to asphalt and fumes can be obtained on the internet at <http://inchem.org/documents/cicads/cicads/cicad59.htm>. Despite conflicting reports, the following bullet points should be noted:

- Currently classified as A4 (not classifiable as a human carcinogen). Asphalt Coal Tar Free
- Breathing of mists, fumes, or vapors should be reduced to a minimum to avoid any ill effects.
- Asphalt and asphalt fumes contain trace levels of polynuclear aromatic hydrocarbons that are known carcinogens.
- Chronic health effects would not be expected as long as good hygiene and proper safety precautions are practiced and exposures are less than the TLVs/RELS.
- After using material or being around fumes, wash exposed areas thoroughly with soap and water. Showering immediately after work is a good personal hygiene practice.

**KEROSENE and NO. 2 FUEL OIL:** Lifetime skin painting studies in animals with similar distillate fuels have produced weak carcinogenic activity following prolonged and repeated exposure. Repeated dermal application has produced severe irritation and systematic toxicity in subacute toxicity studies. Some components of distillate fuels, i.e., paraffins and olefins, have been shown to produce a species specific, sex hormonal dependent kidney lesion in male rats from repeated oral or inhalation exposure. Jet Fuel and No. 1 fuel oil were found to be positive in a few mutagenicity tests while negative in the majority of others. The exact relationship between these results and human health is not known. Chronic human health effects would not be expected as long as good personal hygiene and proper safety precautions are practiced.

### 12. Ecological Information

May cause fouling of water. May be toxic to aquatic animals. Once solidified, this product will no longer exhibit these characteristics.

### 13. Disposal Considerations

Dispose in accordance with local, state, and federal regulations. After cooling, waste or contaminated asphalt mixtures may be scooped and stockpiled for later recycling into asphalt pavement mixtures, pugmilled into cold mix, or disposed in an approved special waste, industrial, or construction debris landfill.

#### **RCRA Information**

This material, if discarded as produced, is not a RCRA "listed" hazardous waste. Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. It is the responsibility of the generator to fully characterize for toxicity and other RCRA parameters prior to disposal (40 CFR 261). Along

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### 13. Disposal Considerations - Continued

#### **RCRA Information - Continued**

with properly characterizing all waste materials, consult state and local regulations regarding proper disposal of this material.

### 14. Transport Information

#### **Proper Shipping Name**

HOT Asphalt, cut back

#### **Hazard Class**

3 (Packing Group III)

#### **DOT Identification Number**

UN1999

#### **DOT Shipping Label**

Flammable Liquid

#### **Packaging Exceptions**

173.150

#### **Packaging Requirements**

173.203, 173.247

### 15. Regulatory Information

#### **U.S. Regulatory Information**

Toxic Substances Control Act: This product is listed on the US TSCA Chemical Inventory Section 8(b).

SARA Section 302: This product contains trace amounts of Hydrogen Sulfide, which is listed on the EPA's Extremely Hazardous Substances (EHS) List (100 lb. final release quantity).

Clean Water Act: Petroleum hydrocarbons are considered hazardous if released into navigable waters.

OSHA Hazard Communication: See individual state requirements for Right-To-Know lists.

#### **SARA Hazard Classes**

Acute Health Hazard

Fire Hazard

#### **SARA Section 313 Notification**

This product contains the following toxic chemical that is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

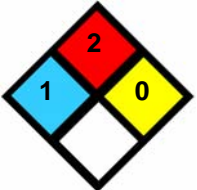
Polycyclic Aromatic Compounds (PACs) (Category N590) = <178 ppm (US EPA default concentration)

Hydrogen Sulfide (CASRN 7783-06-4) is found in trace amounts, much less than the 1% de minimus quantity, therefore is exempt from reporting for this chemical.

This information must be included on all MSDSs that are copied and distributed for this material.

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<b>NFPA</b> 	<b>HMIS</b> <table border="1"><tr><td>HEALTH</td><td>1</td></tr><tr><td>FLAMMABILITY</td><td>2</td></tr><tr><td>REACTIVITY</td><td>0</td></tr><tr><td>PERSONAL PROTECTION</td><td>B,X</td></tr></table>	HEALTH	1	FLAMMABILITY	2	REACTIVITY	0	PERSONAL PROTECTION	B,X
HEALTH	1								
FLAMMABILITY	2								
REACTIVITY	0								
PERSONAL PROTECTION	B,X								

### 16. Other Information

#### Precautionary Label

WARNING - COMBUSTIBLE LIQUID  
WARNING - FLAMMABLE LIQUID (if heated)  
May cause severe burns on contact.  
Harmful or fatal if swallowed. Vapors can Explode.  
Avoid prolonged breathing of vapors.

#### Revision/Preparer Information

MSDS Preparer: Douglas A. Lozier  
MSDS Preparer Phone Number: (317) 872-6010

#### Disclaimer

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**Asphalt Materials, Inc.**

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