

MATERIAL SAFETY DATA SHEET

AEF

1. Product And Company Identification

Supplier Asphalt Materials, Inc. 5400 West 88th Street Indianapolis, IN 46268 Company Contact: Douglas A. Lozier Telephone Number: 317-872-6010 FAX Number: 317-875-4673 E-Mail: doug.lozier@asphalt-materials.com Web Site: www.asphalt-materials.com	Manufacturer Asphalt Materials, Inc. 5400 West 88th Street Indianapolis, IN 46268 Company Contact: Douglas A. Lozier Telephone Number: 317-872-6010 FAX Number: 317-875-4673 E-Mail: doug.lozier@asphalt-materials.com Web Site: www.asphalt-materials.com
Supplier Emergency Contacts & Phone Number CHEMTREC: 800-424-9300 Safety Office: 317-875-4676	Manufacturer Emergency Contacts & Phone Number CHEMTREC: 800-424-9300 Safety Office: 317-875-4676

Issue Date: 01/24/2012
 Product Name: AEF
 CAS Number: Mixture
 Chemical Family: Emulsified complex petroleum hydrocarbon and water
 MSDS Number: 618

Synonyms
 ANIONIC ASPHALT EMULSION
 EMULSIFIED ASPHALT
 FOG-SEAL EMULSION

2. Composition/Information On Ingredients

Ingredient Name	CAS Number	Measure	Percent Of Total Weight
AMTISTRIP, Proprietary			0 - 2
No. 2 FUEL OIL	80394-30-5		0 - 25
PETROLEUM ASPHALT	8032-43-4		25 - 40
TALL OIL SOAP, Proprietary	TSCA Listed		1 - 6
WATER	7732-18-5		60 - 75

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/m³ 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.

3. Hazards Identification

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

Skin Hazards
 Skin contact with hot emulsified asphalt can cause minor thermal burns. Prolonged exposure to vapors, fumes, or mists may cause irritation and redness.

MATERIAL SAFETY DATA SHEET

AEF

3. Hazards Identification - Continued

Ingestion Hazards
 Ingestion is not likely. Ingestion may cause thermal burns. If ingestion of emulsified material occurs, keep victim's head below the 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, dizziness, headache, and nausea.

4. First Aid Measures

Eyes
 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 Emulsified 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 Emulsified Material - Remove emulsified 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: N.A. °F
 Autoignition Point: >400 °F
 Lower Explosive Limit: N.A.
 Upper Explosive Limit: N.A.

Extinguishing Media
 Foam, Carbon Dioxide, Dry Chemical, and Water Spray may all be suitable in extinguishing fires involving this product. 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 ignition. Contain by diking or impounding. Absorbents can be used to contain spill. After containment, emulsified 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 outer 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.

MATERIAL SAFETY DATA SHEET

AE-F

<p>7. Handling And Storage - Continued</p> <p>Handling And Storage Precautions - Continued</p> <p>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.</p> <p>Work Hygiene Practices</p> <p>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.</p> <p>8. Exposure Controls/Personal Protection</p> <p>Engineering Controls</p> <p>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.</p> <p>Eye/Face Protection</p> <p>Safety goggles or chemical splash goggles if splashing is anticipated.</p> <p>Skin Protection</p> <p>Oil impervious gloves, such as Neoprene, if frequent or prolonged contact is expected.</p> <p>Respiratory Protection</p> <p>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.</p> <p>Other/General Protection</p> <p>Wear body covering clothes to avoid prolonged or repeated exposures. Launder before reuse.</p> <p>Incompatibilities - Exposure Limits</p> <p>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/m³ as benzene-extractable inhalable particulate (or equivalent method). NIOSH REL: 5.0 mg/m³ as a 15-minute ceiling limit measured as total particulates TALL OIL SOAP, Proprietary OSHA PEL: Not established for this material.</p>	<p>9. Physical And Chemical Properties</p> <p>Appearance</p> <p>Brown Liquid</p> <p>Odor</p> <p>Characteristic Asphalt Odor</p> <p>Chemical Type: Mixture</p>
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Page 3 of 6

MATERIAL SAFETY DATA SHEET

AE-F

<p>9. Physical And Chemical Properties - Continued</p> <p>Physical State: Liquid</p> <p>Boiling Point: 212 °F</p> <p>Specific Gravity: 0.92-1.05</p> <p>Molecular Weight: 280</p> <p>Vapor Pressure: <1mm-10mm Hg @ 77 F</p> <p>Vapor Density: >1.0</p> <p>pH Factor: 7-11</p> <p>Solubility: Completely</p> <p>10. Stability And Reactivity</p> <p>Stability: Stable</p> <p>Hazardous Polymerization: Will not occur</p> <p>Incompatible Materials</p> <p>Strong Oxidizers</p> <p>Hazardous Decomposition Products</p> <p>Fumes, Smoke, Carbon Monoxide, Hydrogen Sulfide, Sulfur Dioxide, Aldehydes, and Hydrocarbons</p> <p>11. Toxicological Information</p> <p>11.a. International Agency for Research on Cancer (IARC) Ruling</p> <p>Occupational exposures to straight-run bitumens and their emissions during road paving: On the basis of an earlier meta-analysis, the IARC multi-center study, and several more recent independent studies, the Working Group concluded that there was inadequate evidence in humans for the carcinogenicity of occupational exposures during road paving with straight-run bitumens. Also, there was inadequate evidence in experimental animals for the carcinogenicity of extracts and of fume condensates of this type of bitumens. However, studies of workers exposed to bitumen emissions during paving with straight-run bitumens showed mutagenic and genotoxic/cytogenetic effects in these workers. Similar effects were also observed in experimental systems under controlled conditions. This strong mechanistic evidence led to the classification of occupational exposures to straight-run bitumens and their emissions during road paving as "possibly carcinogenic to humans" (Group 2B). However, the IARC Working Group did not make a classification specific to asphalt emulsions. Asphalt emulsions are handled and applied at lower temperatures; therefore if properly handled are not expected to cause cancer in humans.</p> <p>11.b. Health Hazard Characterization:</p> <p>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. Consults International Chemical Assessment Documents relating to asphalt and fumes can be obtained on the internet at http://niche.ornl.gov/documents/ocats/cats/cats659.htm. Despite conflicting reports, the following bullet points should be noted:</p> <ul style="list-style-type: none"> • 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. <p>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</p>	<p>9. Physical And Chemical Properties</p> <p>Appearance</p> <p>Brown Liquid</p> <p>Odor</p> <p>Characteristic Asphalt Odor</p> <p>Chemical Type: Mixture</p>
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Page 4 of 6

MATERIAL SAFETY DATA SHEET
AE-F

11. Toxicological Information - Continued
 severe irritation and systemic 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
 Liquid asphalt emulsion product may cause fouling of water and/or may be toxic to aquatic animals. Once solidified, this product will no longer exhibit these characteristics.

13. Disposal Considerations
 Waste or contaminated asphalt is normally disposed in a special waste or industrial landfill. Consider recycling into pavement mixtures whenever possible.

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

14. Transport Information
 This product as produced and shipped is not considered a hazardous material by the U.S. Department of Transportation.

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

NFPA

HEALTH	1
	0
REACTIVITY	0
PERSONAL PROTECTION	B,X

16. Other Information
Precautionary Label
 WARNING - HOT EMULSIFIED ASPHALT
 May produce minor burns on contact

MATERIAL SAFETY DATA SHEET
AE-F

16. Other Information - Continued
Revisiting/Preparer Information
 MSDS Preparer: Douglas A. Lozier
 MSDS Preparer Phone Number: (317) 872-8010
Reference Documentation
 Information supplied by Heritage Research Group, Indianapolis, Indiana

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 Asphalt Materials, Inc.
Product Line 1992-1993