1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer
Asphalt Materials, Inc.
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Emergency:	CHEMTREC: 800-424-9300

Vendor
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Product Identifier:	J-BAND, VRAM, LJS
Synonyms:	Joint Band, Liquid Joint Band, Longitudinal Joint Sealant

Common Name:	Petroleum Asphalt with Filler
SDS Number:	AMI-502
Revision Date:	3/30/2020
CAS Number:	Mixture
Chemical Family:	Complex Petroleum Hydrocarbon with Inert Filler
Product Use:	Asphalt Paving Joint Sealer

2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Acute toxicity, 5 Inhalation

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: WARNING

GHS Hazard Pictograms:

No GHS pictograms indicated for this product

GHS Hazard Statements:

H333 - May be harmful if inhaled. Vapors containing hydrogen sulfide may accumulate during storage or transport. High level (700 ppm) acute exposure can result in sudden death.

GHS Precautionary Statements:

P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Inhalation:

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.

At normal temperatures and pressures, this product is not likely to present an inhalation hazard. However, when heated, high concentrations of vapor may irritate the respiratory tract and hydrogen sulfide, a highly toxic gas, may be present. Inhaling hydrogen sulfide released from hot products in enclosed areas may cause unconsciousness, convulsions, suffocation, coma, and death. Signs and symptoms of overexposure to hydrogen sulfide include respiratory and eye irritation, dizziness, nausea, coughing, a sensation of dryness and pain in the nose, and loss of consciousness.

Hydrogen Sulfide effects:

0.02 ppm	Odor threshold.
10 ppm	8-hour per day exposure limit to Hydrogen Sulfide.
10-20 ppm	Borderline concentration for eye irritation.
10-100 ppm	Leads to eye damage.
100-150 ppm	Olfactory nerve paralyzed after a few minutes, sense of smell disappears, and often awareness of danger.
320-530 ppm	Leads to pulmonary edema with the possibility of death.
530-1,000 ppm	Causes strong stimulation of central nervous system and rapid breathing.
800 ppm	Lethal concentration of 50% of humans for a 5-minute exposure (LC50).
>1,000 ppm	Immediate collapse with loss of breathing, even after inhalation of a single breath.

Do not depend on sense of smell for warning. Hydrogen Sulfide causes rapid olfactory fatigue (deadens sense of smell).

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

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

Ingestion: 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 victim to obtain medical assistance immediately.

3 COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Ingredients:

CAS#	%	Chemical Name:
8052-42-4	>80%	Asphalt (typical)
0	<7%	Polymer Modifier, Proprietary
0	<7%	Mineral Fillers, Proprietary, Non-Hazardous

Asphalt: Asphalt is a complex mixture of high molecular weight hydrocarbons produced from crude petroleum. Composition varies depending on the source of the 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^3 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 those 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.

4 FIRST AID MEASURES

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

Skin Contact: 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 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 material with solvents.

Eye Contact: 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 victim to obtain medical assistance.

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

5 FIRE FIGHTING MEASURES

Flammability: NFPA Class IIIB

Flash Point: >500°F, >260°C

Flash Point Method: ASTM D-92

Autoignition Temp: >800°F, >430°C

LEL: 1.0%

UEL: 6.0%

Fire and Explosion Hazards:

May produce severe burns on contact.
May produce Hydrogen Sulfide (H2S) gas in confined spaces, closed containers, and tank headspaces.
Vapors can explode.

Extinguishing Media:

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

Fire Fighting Instructions:

Avoid water streams to prevent frothing. Use water spray to cool exposed surfaces and to assist in solidifying hot asphalt material.

6 ACCIDENTAL RELEASE MEASURES

For hot liquid material: Stop source of leak if safe to do so. Eliminate sources of ignition. Contain by diking or impounding. Absorbents can be used to contain small spills. After containment and solidification, asphalt can be collected for disposal. Advise authorities if product has entered a drainage sewer or a water source. Assure conformity with local, state, and federal government regulations for disposal.

No hazards are expected with a release of this material at ambient temperatures.

7 HANDLING AND STORAGE

Handling Precautions:

When opening covers and outlet caps on storage tanks, use a face shield and gloves to avoid possible injury from pressurized hot asphalt. Long sleeved shirts and pants should be worn to minimize thermal burns. Hydrogen Sulfide can be generated and accumulated in storage tanks and bulk transport compartments. Stay upwind and vent storage tanks before unloading. Keep heating units and flues in storage tanks covered with at least 12 inches of asphalt. Do not overheat.

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 BURN OR EXPLODE AND CAUSE INJURY OR DEATH.

Hot Material Warning: Hot material (above 212°F) contact with water results in a violent expansion as water turns to steam. This can lead to a dangerous boilover 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 the previous load without servicing the cargo tank. Keep away from incompatible materials.

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

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

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

Personal Protective Equipment:

Eye and Face Protection: Safety glasses or chemical splash goggles should be worn with a face shield if splashing is anticipated.

Skin Protection: Insulated, oil-impervious gloves for hot asphalt or cloth gloves for 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 and expected, use a 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 fire fighting and in confined spaces when asphalt vapor or Hydrogen Sulfide gas exceeds permissible limits.

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.

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

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.

HYDROGEN SULFIDE:

ACGIH TLV:	1 ppm (1.4 mg/m³) for 8 hours
ACGIH STEL:	5 ppm (7 mg/m³) for 15 minutes

MINERAL FILLER, Proprietary, Non-hazardous

OSHA PEL:	Not established for this material.

POLYMER MODIFIER, Proprietary

OSHA PEL:	Not established for this material.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black/Brown viscous solid. Liquid when hot.		
Physical State:	Solid when cold, Liquid when hot.	**Odor:**	Characteristic asphalt odor
Spec Grav./Density:	1.03	**Solubility:**	Negligible
Viscosity:	Thin fluid when hot. Solid when cold.	**Softening Point:**	120 degrees F and above
Boiling Point:	>750°F, >400°C	**Heat Value:**	18,000 BTU per pound
Flammability:	Class IIIB Combustible	**Freezing/Melting Pt.:**	220°F, 104°C
Vapor Pressure:	1.9 E-9 psia	**Flash Point:**	>450°F
Evap. Rate:	Negligible	**Vapor Density:**	Lighter than air
Molecular weight:	320	**VOC:**	Negligible
Decomp Temp:	>750 F	**Bulk Density:**	8.59 lb./gallon
		Auto-Ignition Temp:	>800°F
		UFL/LFL:	6.0% / 1.0%

10 STABILITY AND REACTIVITY

Chemical Stability:	Product is stable under normal conditions.
Conditions to Avoid:	Contact with oxidizers
Materials to Avoid:	Strong Oxidizing Agents.
Hazardous Decomposition:	Fumes, smoke, carbon monoxide, hydrogen sulfide, sulfur dioxide, aldehydes, and hydrocarbons.
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

International Agency for Research on Cancer Ruling

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).

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.

12 ECOLOGICAL INFORMATION

No hazards are expected to wildlife, plants, aquatic animals, etc. from this material in its solid state. When in use, material will be hot and liquified and may be toxic to such plants and animals.

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 or disposed in an approved special waste, industrial waste, or construction debris landfill.

RCRA Information: This material, if discarded as produced, is not a RCRA "listed" or "characteristic" 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 properly characterizing all waste materials, consult state and local regulations regarding proper disposal of this material.

14 TRANSPORT INFORMATION

UN3257, Elevated temperature liquid, n.o.s., at or above 100 C and below its flash point (including molten metals, molten salts, etc.), 9, PGIII, (Contains Petroleum Asphalt)

Packaging Requirements - Bulk:	49 CFR 173.247
Packaging Requirements - Non-Bulk:	None
Packaging Exceptions:	None

This material when shipped in its semi-solid to solid form or shipped at temperatures less than 212°F is NOT considered a DOT hazardous material.

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Asphalt (typical) (8052-42-4) [>80%] MASS, NRC, PA, TSCA, TXAIR

Polymer Modifier, Proprietary (0) [<7%]

Mineral Fillers, Proprietary, Non-Hazardous (0) [<7%]

This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Regulatory CODE Descriptions

MASS = MA Massachusetts Hazardous Substances List
NRC = Nationally Recognized Carcinogens
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level

SARA Section 313 Notification:

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

Polycyclic Aromatic Compounds (PACs) (Category N590)

Hydrogen Sulfide (CASRN 7783-06-4) is found in varying trace amounts 0-1% depending on temperature, source of crude, etc.

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

16 OTHER INFORMATION

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

Asphalt Materials, Inc.

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