

MATERIAL SAFETY DATA SHEET

MSDS Number: T021999

Revision Date: April 2009

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: Asphalt Blend

LABEL: TAMKO

USE & DESCRIPTION: Raw Material for Asphalt Roofing Products

CHEMICAL FAMILY: Hydrocarbon

MANUFACTURED FOR:

TAMKO Building Products, Inc.
P.O. Box 1404
Joplin, MO 64802-1404

EMERGENCY TELEPHONE NUMBERS;

General Information: 1-904-284-7571 (8 a.m. - 5 p.m. EST)
1-620-429-1800 (8 a.m. - 5 p.m. CST)
1-417-624-6644 (8 a.m. - 5 p.m. CST)
Chemtrec: 1-800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Components	Cas No.	% by Wt.	Exposure Limits*				
			OSHA		ACGIH		Unit
			TWA	STEL	TWA	STEL	
Asphalt	8052-42-4	90 - 100	15 total 5 resp.	NE	0.5	NE	mg/m ³
Tall Oil Pitch	8016-81-7	0 - 10	15 total 5 resp.	NE	10 total 3 resp.	NE	mg/m ³

*See Section 8 for additional relevant exposure limits
NE = Not established

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

WARNING!

VAPORS, MISTS OR FUMES MAY IRRITATE THE EYES AND RESPIRATORY TRACT
ELEVATED TEMPERATURE MATERIAL MAY CAUSE THERMAL BURNS
HEATING MAY RELEASE TOXIC HYDROGEN SULFIDE GAS (H₂S) WHICH MAY
ACCUMULATE IN CONFINED SPACES

HMIS Rating: Health - 0 Flammability - 1 Reactivity - 0	NFPA Rating: Health - 0 Flammability - 1 Reactivity - 0
---	---

Potential Health Effects

EYE CONTACT: Vapors of hot asphalt may cause eye irritation.

SKIN CONTACT: Handling of hot asphalt can cause severe burns because it is sticky and not readily removed from skin. Vapors of hot asphalt may irritate skin. Occasional contact with asphalt is not expected to have serious health effects. Prolonged or repeated skin contact could result in absorption of hazardous components.

INGESTION: If swallowed, do not induce vomiting. Avoid aspiration of vomit into the lungs which can cause inflammation or pneumonitis. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration. Get immediate medical attention.

INHALATION: Exposure to fumes, vapors, or mists may cause irritation of the nose and throat, and possible signs of central nervous system depression (symptoms may include headache, dizziness, loss of coordination, and drowsiness). Loss of consciousness can occur in poorly ventilated or confined spaces. Additional signs and symptoms of exposure may include reduced appetite and abnormal fatigue. Use of this product in well-ventilated working conditions is not expected to cause adverse effects.

Hydrogen sulfide (H₂S), an extremely toxic gas, may be emitted from heated asphalt and may accumulate in storage tanks and other confined spaces. At low concentrations (< 1 ppm), H₂S can be irritating to the eyes, nose and throat, and at high concentrations (>500 ppm) can cause rapid unconsciousness and death. The odor of H₂S cannot be used as an indicator of exposure, because the gas causes rapid olfactory fatigue which deadens the sense of smell.

Use this product only under well-ventilated working conditions.

CHRONIC EFFECT/CARCINOGENICITY/SPECIAL TOXIC EFFECTS: This product contains petroleum asphalt. Petroleum asphalt is not listed as a carcinogen by OSHA or NTP. The International Agency for Research on Cancer (IARC) has determined there is inadequate evidence that asphalt alone is carcinogenic to humans, and that there is inadequate evidence for the carcinogenicity of undiluted air-refined asphalts in experimental animals. The National Institute of Occupational Safety and Health (NIOSH), has concluded that at higher temperatures roofing asphalt fumes are a potential occupational carcinogen. If this product is heated or comes in contact with heated material, avoid breathing fumes.

This product may contain small amounts of Polycyclic Aromatic Hydrocarbons (PAH's) which are recognized carcinogens in humans and experimental animals.

MEDICAL CONDITIONS AGGRAVATED BY OVER - EXPOSURE:

Asphalt: See Section 11

Tall Oil Pitch: Repeated or prolonged exposure to the substance can produce damage to eyes.

4. FIRST AID MEASURES

EYE CONTACT: Flush immediately with clear water for 20 minutes. Seek medical attention promptly.

SKIN CONTACT: If hot asphalt contacts exposed skin, cool immediately with cold water and seek medical assistance promptly. Exercise extreme care in removing contaminated clothing to avoid damage to skin surfaces. "Petroleum jelly, baby oil, or mineral oil will facilitate removal of asphalt from skin." Launder contaminated clothing before reuse. Discard contaminated leather articles. If skin has not burned, wash with soap and water.

INGESTION: If swallowed, do not induce vomiting. Avoid aspiration of vomit into the lungs which can cause inflammation or pneumonitis. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head lower than hips to prevent aspiration. Get immediate medical attention.

INHALATION: Remove from further exposure. If unconsciousness occurs, seek immediate medical assistance. If breathing stops, use mouth-to-mouth resuscitation.

5. FIRE FIGHTING MEASURES

FLASH POINT (METHOD): 425^o+ F (COC)

FLAMMABLE LIMITS (% VOLUME IN AIR - SOLVENT COMPONENT):

Lower = N/A

Upper = N/A

AUTOIGNITION TEMPERATURE: Greater than 905^o F

EXTINGUISHING MEDIA: Use CO₂ foam, dry chemical, halon, or water fog to extinguish.

SPECIAL FIRE FIGHTING PROCEDURES: Use of SCBA and full protective equipment (bunker gear). Keep personnel removed from and upwind of the fire. Cool adjacent structures and storage drums with water spray. Evacuate area. Prevent runoff, from fire control dilution, from entering streams or drinking water supply.

UNUSUAL FIRE OR EXPLOSION HAZARDS: Incomplete burning can produce carbon monoxide. Water or foam may cause frothing, which can be violent and endanger fire fighters, especially if sprayed into containers of hot liquids.

6. ACCIDENTAL RELEASE MEASURES

LAND SPILL: Treat spill as an oil spill. Shut off and eliminate all sources of ignition. Remove leaking containers to a safe area. Contain and remove by mechanical means. Guard against contamination of water supplies. Solidified asphalt can be scraped up from the ground using mechanical dredges or lifts. Report spills to appropriate authorities. Dispose of in accordance with Federal, State and Local regulations. Do not burn.

WATER SPILL: Solidified asphalt may be removed from water with mechanical dredges or lifts. Runoff may create fire or explosion hazard in sewers. Report spills to appropriate authorities. Dispose of in accordance with Federal, State and Local regulations. Avoid breathing vapors. Do not burn.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Store away from ignition sources in a cool area. When material is heated to application temperatures, precautions should be taken to prevent thermal burns.

NOTE: Hydrogen sulfide (H₂S), an extremely toxic gas, may be emitted from heated asphalt and may accumulate in storage tanks and other confined spaces.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: NIOSH approved respiratory protection must be used when fumes, vapor or mist concentrations are unknown or exceed the exposure limits. Avoid prolonged or repeated breathing of fumes, vapor or mists.

EYE PROTECTION: Eye and face protection is recommended when contact with material may occur.

SKIN: Use whole body protection, including impervious gloves and boots.

VENTILATION: Use in well ventilated areas.

EXPOSURE GUIDELINES: Use away from all ignition sources.

Additional potentially relevant exposure limits are listed in Section 2.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Black-brown viscous liquid to solid.

BOILING POINT: 800-1400 °F

Ph: Not applicable

MELTING POINT: 92 °F

SPECIFIC GRAVITY: 0.9 – 1.1

VAPOR PRESSURE: Not applicable

VAPOR DENSITY (AIR = 1): 1

% VOLATILE, BY VOLUME: No data available

SOLUBILITY IN WATER: Negligible

EVAPORATION RATE (BUTYL ACETAT = 1)

10. STABILITY AND REACTIVITY

STABILITY: This product is stable.

CONDITIONS TO AVOID: Keep away from strong oxidizers. Do not store near open flame.

HAZARDOUS POLYMERIZATION: Does not occur.

INCOMPATIBILITY (MATERIALS TO AVOID): Avoid strong acids, alkalis, oxidizers and water.

HAZARDOUS DECOMPOSITION PRODUCTS: Incomplete burning can produce carbon monoxide, hydrogen sulfide.

11. TOXICOLOGICAL INFORMATION: According to a December 2000 NIOSH report (No. 2001-110) titled "Hazard Review - Health Effects of Occupational Exposure to Asphalt," research has identified low levels of Polycyclic Aromatic Hydrocarbons (PAH's) in laboratory generated asphalt fumes. Benzo(a)pyrene, a PAH and known carcinogen, has been identified in field-generated asphalt fumes. Asphalt roofing fume condensates and fractions have been shown to contain chemicals known as PAH's, which have a chemical structure similar to known carcinogens and genotoxins. Laboratory-generated asphalt fumes have been shown to be genotoxic. Laboratory-derived roofing asphalt fume condensates have been shown to be mutagenic, clastogenic, and inhibit intracellular communication in mammalian cells.

Laboratory studies have shown chemical extracts of asphalt fumes to be carcinogenic to the skin of experimental animals following lifetime exposures, and to show positive mutagenicity in screening bioassays. The relevance of these studies to human exposures is not known at this time. Inhalation studies have not been conclusive regarding asphalt's carcinogenic potential; however, adverse lung effects were seen in several species of laboratory animals.

Skin application of undiluted air-refined (oxidized) asphalt to experimental animals has not resulted in skin tumors. The results were weakly positive when the samples were applied in a solvent vehicle.

12. ECOLOGICAL INFORMATION: No specific data on this product. Product may cause mechanical damage to aquatic organisms. The mineral spirit component is expected to volatilize in the environment and to be moderately toxic to both freshwater and marine organisms. The bioaccumulation potential is unknown.

13. DISPOSAL CONSIDERATIONS: EPA Hazard Class: Acute Hazard/Chronic Hazard/Fire Hazard. Dispose of in accordance with Federal, State and Local regulations.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Elevated Temperature Liquid N.O.S.

DOT HAZARD CLASSIFICATION: N.O.S. 9, hazardous for DOT Transport. No exceptions to 49 CFR.

DOT LABELING REQUIREMENTS

UN/NA NUMBER: UN 3257 PG III

PACKING GROUP: PG III

NAERG96 NUMBER: 128

IMDG CODE: Hazardous for vessel transport under the IMDG Code

IMDG SHIPPING NAME: Elevated Temperature Liquid N.O.S.

IMDG HAZARD CLASS: 9

UN/ID NUMBER: UN 3257

PACKING GROUP NUMBER: PG III

15. REGULATORY INFORMATION

SARA TITLE III/SUPER FUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 - SECTIONS 302,304,311, 312, AND 313:

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES: 40 CFR PARTS 300 & 355 (52 FR 13378, 15412 - APRIL 28, 1987; 52 FR 48072 - DECEMBER 12, 1987; 53 FR 5574 - FEBRUARY 15, 1988).

This product contains the following component(s) identified on Appendix A and B of the extremely hazardous substance list:

<u>Component</u>	<u>Reportable Quantity (lbs)</u>	<u>Threshold Planning Quantity (lbs)</u>
Hydrogen Sulfide	100	500

SECTION 304 - EMERGENCY RELEASE NOTIFICATIONS: 40 CFR PART 355 (52 FR 13378, 15412 - APRIL 28, 1987, 52 FR 48072 - DECEMBER 17, 1987, 53 FR 5574 - FEBRUARY 25, 1988).

This product contains the following component(s) identified either as an extremely hazardous substance (see Section 302) or a CERCLA Hazardous substance 40 CFR 302 (51 FR 34547 - SEPTEMBER 29, 1988), which in case of a spill or release may be subject to reporting requirements under Section 304 of Title III: HYDROGEN SULFIDE

SECTION 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS: 40 CFR PART 370 (52 FR 38344 - OCTOBER 15, 1987)

Depending on local, state and federal regulations, material safety data sheets (MSDS's) or lists of MSDS's (product names) may be required to be submitted to the State Emergency Response Commission, Local Emergency Planning Committee, and Local Fire Department if you have:

10,000 pounds or more of an OSHA Hazardous substance or 500 pounds or the threshold planning quantity whichever is less, of an extremely hazardous substance.

NOTE: Reportable Quantity levels can vary from state to state and year to year depending on applicable State and/or Federal Regulations.

This product is covered under the criteria defined in OSHA's Hazard Communication Standard 29 CFR 1910.1200 (52 FR 31852 - AUGUST 24, 1987) and should be reported under the following EPA categories:

- XX Immediate (ACUTE) Health Hazard
- Delayed (CHRONIC) Health Hazard
- Fire Hazard
- Sudden Release of Pressure Hazard
- Reactive Hazard

CALIFORNIA PROPOSITION 65:

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

16. OTHER INFORMATION

- Preparation Date: April 30, 2009
- Revised:
 -
- Replaces: None

Disclaimer of Liability

The information and recommendations contained herein are to the best of **TAMKO Building Products, Inc.'s** knowledge and belief, accurate and reliable as of the date issued. **TAMKO Building Products, Inc.** does not warrant or guarantee their accuracy or reliability, and **TAMKO Building Products, Inc.** shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use.