



MATERIAL SAFETY DATA SHEET

Hot Mix Asphalt

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Hot Mix Asphalt, Bituminous Concrete (Blacktop)**
Synonyms: None
Chemical Family: Petroleum Asphalt

Company Identification: CALPORTLAND COMPANY
2025 E. Financial Way
Glendora, CA 91741
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Approved By: Jay Grady
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2. COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINING: HAZARDOUS AND/OR REGULATED COMPONENTS

<u>Chemical Name</u>	<u>Amount</u>	<u>CAS Number</u>	<u>OSHA PEL (ppm) Total Dust</u>	<u>OSHA PEL (ppm) Respirable Dust</u>	<u>ACGIH TLV (ppm) Total Dust</u>
Aggregate (crushed stone, sand and gravel)	90-95%	Mixture	15 mg/m ³	5 mg/m ³	10 mg/m ³
Petroleum Asphalt Oil	5-10%	Mixture	15 mg/m ³	5 mg/m ³	10 mg/m ³
Silica Crystalline	>1%	14807-60-7	10 mg/m ³	0.05 mg/m ³	0.05 mg/m ³

COMPOSITION COMMENT:

Trace Elements: Hot Mix Asphalt is made from materials mined from the earth and is processed using energy provided by fuels. Trace amounts of naturally occurring, potentially harmful chemical might be detected during chemical analysis.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER! RELEASE OF TOXIC HYDROGEN SULFIDE (H₂S) GAS CAN BE OMITTED FROM HOT ASPHALT. DUE TO ODOR MASKING/FATIGUE OF THE SENSE OF SMELL, THE ODOR OF H₂S (ROTTEN EGGS) CANNOT BE RELIED UPON AS A MEANS OF DETECTION. INHALATION OF A FEW BREATHS OF HIGH CONCENTRATIONS (700 PPM) COULD BE FATAL.

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Routes of Exposure:

Eye Contact: Heated material can cause severe thermal burns. Asphalt fumes may cause eye irritation. Exposure to hydrogen sulfide at concentrations above 4 ppm may cause eye irritation.

Skin Contact: Heated material can cause severe thermal burns. Emissions may cause mild irritation. There may be an increased sensitivity to sunburn when the skin is exposed to asphalt fumes. Chronic exposure to petroleum asphalt has caused skin disorders such as dermatitis, folliculitis, or oil acne.

Ingestion: Direct contact with heated material can produce thermal burns on contacted tissues. Gastric masses and stomach obstructions have been reported in individuals who have chewed and swallowed asphalt.

Inhalation: Emissions from heated petroleum asphalt may have an unpleasant odor, and may produce nausea and irritation of the upper respiratory tract. Naptha component vapors (hot asphalt) at high concentrations in enclosed spaces may cause symptoms of euphoria, respiratory irritation and edema, headaches, dizziness, drowsiness, conclusions, coma, cyanosis and generalized depression. Hydrogen sulfide causes respiratory irritation at concentrations of 4 to 100 ppm. At low concentration H₂S has a rotten egg odor. At elevated concentrations H₂S acts as a systemic poison, causing unconsciousness and death by respiratory paralysis. Chronic inhalation of petroleum asphalt emissions may contribute to respiratory irritation. If hardened asphalt concrete is subjected to mechanical forces which generate dust particles, exposure to respirable crystalline silica dust is possible.

Medical Conditions which May be Aggravated by Inhalation or Dermal Exposure: Existing abnormal conditions of the skin and/or respiratory system may be aggravated by exposure to asphalt fumes and by petroleum distillates. Exposure to dust from disrupted hardened asphalt concrete may aggravate respiratory diseases or dysfunctions, and skin and eye conditions.

Carcinogenic Potential: Petroleum asphalt and the asphalt additives in this product are not listed as a carcinogen by NTP, OSHA, or IARC. Crystalline silica, a component of this product, is listed by IRAC but not by OSHA. IRAC has determined that there is sufficient evidence for carcinogenicity to experimental animals exposed to crystalline silica and limited evidence for carcinogenicity to humans. "Limited evidence" means that a causal relationship is possible; however, other explanations such as chance, bias or confounding factors cannot adequately be excluded. NTP has listed crystalline silica as reasonably anticipated to be a human carcinogen. Because this product contains substances listed as carcinogens by these organizations which may result in exposures, the following warning is required pursuant to California Proposition 65:

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

4. FIRST AID MEASURES

Eyes: Flush eye(s) with plenty of water for 15 minutes, while holding eyelids open. Beyond flushing, do not attempt to remove material from eyes except under medical supervision. Contact physician.

Skin: Hot Material – Remove contaminated clothing and immediately flush in cool water for at least 15 minutes. Apply iced water or cold packs to burned area if burned area is less than 10% of the body surface. Do not attempt to remove material from the burn. Get prompt medical attention. Cold Material – Clean exposed skin with oil dissolving skin cleaner. Do not use solvents or thinners to remove material from the skin.

Ingestion: Do not induce vomiting. If conscious, give large amounts of water. Contact a physician immediately.

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Inhalation of Airborne Dust: Remove to fresh air if breathing is difficult. Get prompt medical attention if breathing remains difficult or if irritation persists.

5. FIRE FIGHTING MEASURES

Flash Point – Typ. >260F

Lower Explosive Limit – Not Established

Upper Explosive Limit – Not Established

Auto Ignition Temperature – Not Established

Extinguishing Media – Agents approved for Class B hazards

Special fire fighting Procedures – None

Hazardous Combustion Products – Hydrocarbons

Unusual Fire & Explosion Hazards – Explosive vapors

6. ACCIDENTAL RELEASE MEASURES

Personnel involved in cleanup processes should implement controls as identified in section 8 as appropriate. Keep all ignition sources at least 50 feet away. Avoid personal contact with heated material. Prevent materials from entering streams, drainages or sewers. Spills entering surface waters (or any other watercourse or sewers entering/leading to surface waters) that cause a sheen must be reported to the National Response Center 800/424-8802. None of the components are subject to the reporting requirements of Title III of SARA, 1986 and 40 CFR 372.

Dispose of waste material according to local, state and federal regulations.

7. HANDLING AND STORAGE

Store away from all ignition sources and open flames, in accordance with applicable laws and regulations. Storage containers should be ventilated to reduce fire and explosion hazard, and possible overexposure of personnel to fumes and vapors. Do not weld, heat, or drill container. Emptied container may contain hazardous material which may ignite explosively if heated sufficiently. When petroleum asphalt products are heated, potentially irritating emissions may be released. Respirable dust may be generated when hardened asphalt concrete is subjected to mechanical forces, such as in demolition work, surface treatment and recycling of pavement. Tripping accidents have occurred because of asphalt buildup on bottoms of shoes and boots. Materials should be removed regularly to prevent such accidents. Do not store near food and beverages or smoking material. Avoid incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Eye Protection: Safety glasses with side shields should be worn as a minimum protection. Wear chemical goggles to prevent eye contact with material.

Skin Protection: Resistant gloves should be worn to protect hands. Protective clothing should be worn to prevent skin contact.

Respiratory Protection: Not required under normal use and working conditions. For air contamination concentrations which exceed or are likely to exceed applicable exposure limits, use a NIOSH/MSHA approved, contaminate specific air purifying respirator. If such concentrations are sufficiently high that the air-purifying respirator is inadequate, or if oxygen adequate to sustain life is not present, use a positive pressure self contained breathing apparatus. Consult an industrial hygienist for evaluation of exposures. Respirator and/or filter cartridge selection should be based on American National Standards Institute (ANSI) Standards Z88.2 Practices for Respiratory Protection.

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Ventilation: Use local exhaust or general dilution ventilation to control exposure within applicable limits.

Hygiene: Use normal good hygiene practices. Clothes saturated from contact with petroleum distillates should be removed promptly to prevent continued contact with skin. Wash hands with soap and water before eating, drinking, smoking and using toilet facilities. Wash work clothes after each use. Clean skin with soap and water, or an oil dissolving skin cleaner.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance – Course black material

Odor – Petroleum odor

Physical State – Solid

Specific Gravity (H₂O=1) – 2.2 – 2.5

pH (in water) (ASTM D 1293-95) – Not Established

Solubility in Water – Not Established

Vapor Pressure – Not Applicable

Vapor Density – Not Established

Boiling Point – >350F

Melting Point – Not Established

Evaporation Rate – Not Applicable

10. STABILITY AND REACTIVITY

Stability: Stable.

Conditions to avoid: Keep away from ignition sources. Avoid contact with incompatible materials.

Hazardous Polymerization: Hazardous polymerization will not occur.

Incompatibility with other materials: Strong oxidizers may react with hydrocarbons. Adding water to hot asphalt presents an explosion hazard.

Hazardous Decomposition: Carbon monoxide, nitrogen oxide, sulfur dioxide, hydrogen sulfide, and various hydrocarbons may be released by thermal decomposition. Hazardous vapors may collect in enclosed vessels or areas if not properly ventilated.

11. TOXICOLOGICAL INFORMATION

Route of Exposure: Inhalation, Ingestion, Skin and Eye contact.

Toxicological Data: Acute and chronic overexposure to this material or its components may cause systemic toxicity, including adverse effects to the following: liver, kidney, lung, skin, spleen, thymus, blood elements, lymph nodes, testes, bone marrow, and nervous system. Exposure to components of this material may cause the following specific symptoms, depending on the concentration and duration of exposure: anemia, pallor, fatigue, loss of appetite, anxiety, and melanosis. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately inhaling vapors may be harmful or fatal. Emissions from heated petroleum asphalt may have an unpleasant odor, and may produce nausea and irritation of the upper respiratory tract. Naptha component vapors (hot asphalt) at high concentrations in enclosed spaces may cause symptoms of euphoria, respiratory irritation and edema, headaches, dizziness, drowsiness, confusion, coma, cyanosis and generalized depression. Hydrogen sulfide causes respiratory irritation at concentrations of 4 to 100 ppm. At low concentration H₂S has a rotten egg odor. At elevated concentrations H₂S acts as a systemic poison, causing unconsciousness and death by respiratory paralysis.

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Chronic inhalation of petroleum asphalt emissions may contribute to respiratory irritation. If hardened asphalt concrete is subjected to mechanical forces which generate dust particles, exposure to respirable crystalline silica dust is possible.

Carcinogenicity: Petroleum asphalt and the asphalt additives in this product are not listed as a carcinogen by NTP, OSHA, or IARC. Crystalline silica, a component of this product, is listed by IRAC but not by OSHA. IRAC has determined that there is sufficient evidence for carcinogenicity to experimental animals exposed to crystalline silica and limited evidence for carcinogenicity to humans. "Limited evidence" means that a causal relationship is possible; however, other explanations such as chance, bias or confounding factors cannot adequately be excluded. NTP has listed crystalline silica as reasonably anticipated to be a human carcinogen. Because this product contains substances listed as carcinogens by these organizations which may result in exposures, the following warning is required pursuant to California Proposition 65:

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

Teratogenicity, Mutagenicity, Other Reproductive Effects: This product may contain components which may cause adverse reproductive and/or development effects.

Sensitization to Material: The possibility of allergic sensitization should be considered.

Pre-Existing Conditions Aggravated by Exposure: Existing abnormal conditions of the skin and/or respiratory system may be aggravated by exposure to asphalt fumes and by petroleum distillates. Exposure to dust from disrupted hardened asphalt concrete may aggravate respiratory diseases or dysfunctions, and skin and eye conditions.

12. ECOLOGICAL INFORMATION

Ecotoxicity: This material may be toxic to fish and other aquatic life and may impede growth of vegetation.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of waste material according to local, state and federal regulations.

14. TRANSPORTATION INFORMATION

Hazardous Materials Description/Proper Shipping Name: Hot Mix Asphalt

Hazard Class: None

Identification Number: Not Applicable

Required Label Text: If the shipping temperature of a solid equals or exceeds 464 F, DOT regulations classify the solid as an "Elevated Temperature Material", and a "Hot" Label is required.

Hazardous Substances/Reportable Quantities: Not Applicable

Transport in accordance with local regulations, where applicable. Consult 49 CFR 172.101 for shipping information.

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15. REGULATORY INFORMATION

FEDERAL REGULATORY STATUS:

Status under OSHA Hazard Communication Standard, 29 CFR 1910.1200: This product does contain components that are considered a "hazardous chemical" under this regulation, and should be included in the employer's hazard communication program.

Reportable Quantities Under the Clean Water Act, CERCLA, and EPCRA, 40 CFR 117, 302 and 355: Releases of this product may be reportable to the National Response Center (1-800-424-8802). Check with state and local regulations for any additional requirements as these may be more restrictive than federal laws and regulations.

Hazard Category and Applicability of EPCRA Hazardous Substance Inventory Reporting, 40 CFR 370: This product qualifies as a "hazardous substance" with delayed health effects.

Applicability of EPCRA Toxic Chemical Release Inventory (TRI) Reporting, 40 CFR 372: This product is not subject to TRI reporting and all potentially covered constituents are present in de minimus concentrations.

Status Under the Toxic Substances Control Act, 40 CFR 710: The chemicals used in this product are on the TSCA inventory list.

Status under the Federal Hazardous Substances Act and Its Regulations: Portland cement is a "hazardous substance" subject to the following labeling requirements for consumer use:

Status under Workplace Hazardous Materials Information System (WHMIS), Canada: This product is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products Regulations and is therefore subject to the labeling and MSDS requirements of the Workplace Hazardous Materials Information System (WHMIS).

Status under Canadian Environmental Protection Act: Not Listed.

16. OTHER INFORMATION

Label Requirements:

DANGER! RELEASE OF TOXIC HYDROGEN SULFIDE (H2S) GAS CAN BE OMITTED FROM HOT ASPHALT. DUE TO ODOR MASKING/FATIGUE OF THE SENSE OF SMELL, THE ODOR OF H2S (ROTTEN EGGS) CANNOT BE RELIED UPON AS A MEANS OF DETECTION. INHALATION OF A FEW BREATHS OF HIGH CONCENTRATIONS (700 PPM) COULD BE FATAL.

Hazardous Material Information System (HMIS):	Health	2
	Flammability	1
	Physical Hazard	1
	Personal Protection	B

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NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
Protective Equipment: Safety glasses, gloves, respirator

ADDITIONAL INFORMATION:

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY CALPORTLAND , except that the product shall conform to contracted specifications. The information provided herein was believed by CalPortland Company to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. Buyer's exclusive remedy shall be for damages and no claim of any kind, whether as to product delivered or for non-delivery of product, and whether based on contract, breach of warranty, negligence, or otherwise shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

END OF MSDS