



Asphalt Cement, All Grades

Material Safety Data Sheet

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Emergency Overview

Physical State: Liquid **Odor:** Characteristic, sour,
Color: Black tar-like odor.

WARNING:

Hot product can cause burns to skin. If burned by hot product, cool affected area immediately with cool water. Do not attempt to remove solidified material from skin. Seek medical attention immediately. Hot asphalt can release toxic hydrogen sulfide gas (H₂S)! Hydrogen sulfide can accumulate in vapor space of tanks and vessels during transfer and storage of this material. Water contact can cause a violent eruption of hot asphalt. Fumes from hot product can cause irritation to the eyes, skin, and respiratory system.

Hazard Rankings

	HMIS	NFPA
Health Hazard	1	0
Fire Hazard	1	1
Flammability	1	1
Reactivity	0	0

Protective Equipment

Minimum Recommended
See Section 8 for Details

This recommendation reflects minimum PPE when product is at elevated temperatures.



SECTION 1. PRODUCT IDENTIFICATION

Trade Name: Asphalt Cement, All Grades **Technical Contact:** (914) 949-2000

Product Number: Various **Medical Emergency:** (800) 424-9300

CAS Number: Mixture **CHEMTREC Emergency:** (800) 424-9300
(United States Only)

Product Family: Asphalt Products

Synonyms: Performance Graded Asphalt (unmodified) PG 52-28, PG 52-34, PG 58-22, PG 58-28, PG 64-22, PG 64-28, PG 67-22, and PG 70-22. Penetration Graded Asphalt (unmodified) 40/50, 60/70, 85/100, 135/145, 180/200, and 200. Asphalt Cement AC 5, AC 10, AC 20, AC 30, and AC 40. EB-58. L-619 Industrial Asphalt, Bitumen.

SECTION 2. COMPOSITION

Component Name(s)	CAS Registry No.	Concentration (%)
Asphalt	8052-42-4	88 - 100
Proprietary Process Oils	Mixture	0 - 10
Proprietary Amine Complex Antistrip Additive	Mixture	0 - 10

SECTION 3. HAZARDS IDENTIFICATION

Major Route(s) of Entry: Skin contact and inhalation.

Signs and Symptoms of Acute Exposure

Eye Contact: If heated, this material may cause irritation with tearing, redness, or a stinging or burning feeling. Effects may become more serious with prolonged contact.

Skin Contact: May cause irritation with redness, an itching or burning feeling, and swelling of the skin. Skin contact may cause harmful effects in other parts of the body. Effects may become more serious with prolonged contact.

Inhalation: The vapor or fumes from this material may cause respiratory irritation. Symptoms of respiratory irritation may include coughing and difficulty breathing. If this material is heated, fumes may be unpleasant and produce nausea and irritation of the eye and upper respiratory tract. Hydrogen sulfide has a strong rotten-egg odor. However, with continued exposure and at high levels, H₂S may deaden a person's sense of smell. If the rotten egg odor is no longer noticeable, it may not necessarily mean that exposure has stopped. At low levels, hydrogen sulfide causes irritation of the eyes, nose, and throat. Moderate levels can cause headache, dizziness, nausea, and vomiting, as well as coughing and difficulty breathing. Higher levels can cause shock, convulsions, coma, and death. After a serious exposure, symptoms usually begin immediately.

Ingestion: If swallowed at ambient temperatures, no significant adverse health effects are anticipated. If swallowed in large quantities, this material can obstruct the intestine.

Delayed or Other Health Effects

Target Organs: Contains material which may cause damage to the following organs: kidneys, liver, upper respiratory tract, skin, and eye (lens or cornea).

Cancer: May cause cancer in laboratory animals, but the available information is inadequate to determine if this material can cause cancer in humans.

SECTION 4. FIRST AID MEASURES

Take proper precautions to ensure your own health and safety before attempting rescue or providing first aid.

Eye Contact: Check for and remove contact lenses. Flush eyes with cool, clean, low-pressure water while occasionally lifting and lowering eyelids. If heated material should splash into eyes, flush eyes immediately with fresh water for 15 minutes while holding eyelids open. Get immediate medical attention.

Skin Contact: Remove clothing and shoes if contaminated. To remove the material from skin, apply a waterless hand cleaner, mineral oil, or petroleum jelly. Then wash with soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse. If the hot material gets on skin, quickly cool with water. See a doctor for extensive burns. Do not try to peel the solidified material from the skin, or use solvents or thinners to dissolve it. The use of vegetable oil or mineral oil is recommended for removal of this material from the skin.

Inhalation: Move the exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, 100% humidified oxygen should be administered by a qualified individual. Get medical attention if breathing difficulties continue. If exposure to hydrogen sulfide (H₂S) gas is possible during an emergency, wear an approved, positive pressure air-supplying respirator.

Ingestion: Do not induce vomiting. Do not give anything to drink. Never give anything by mouth to a person who is not fully conscious. If significant amounts are swallowed or irritation or discomfort occurs, seek medical attention immediately.

Note to Physicians: SKIN: Hot material may cause skin burns. Immerse skin covered with hot material in cool water to limit tissue damage and prevent spread of liquid product. Consider leaving cooled material on skin unless contraindicated by contamination or potential for tattooing. If removal is necessary, mineral oil may be of assistance in minimizing skin loss when removing cool, hardened asphalt.

EYES: Hot material may cause burns to the eyes. Early ophthalmologic evaluation is recommended.

INGESTION: Check for possible bowel obstruction with ingestion of large quantities of material.

SECTION 5. FIRE FIGHTING MEASURES

NFPA Flammability Classification NFPA Class-III B combustible material

Flash Point Open Cup: >232°C (>450°F).

Lower Flammable Limit No data. **Upper Flammable Limit** No data.

Autoignition Temperature	371.1°C (700°F)
Hazardous Combustion Products	Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur and/or nitrogen. Hydrogen sulfide and other sulfur-containing gases can evolve from this product particularly at elevated temperatures.
Special Properties	Fight the fire from a safe distance in a protected location. Cool surface with water fog. Molten material can form flaming droplets if ignited. Water or foam can cause frothing. Use of water on product above 100°C (212°F) can cause product to expand with explosive force. Do not allow liquid runoff to enter sewers or public waters.
Extinguishing Media	Use dry chemical, foam, carbon dioxide, or water fog to extinguish flames.
Protection of Fire Fighters	Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies. Withdraw immediately from the area if there is a rising sound from a venting safety device or discoloration of vessels, tanks, or pipelines.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Protective Measures	Eliminate all sources of ignition in vicinity of spilled material. If this material is released into a work area, evacuate the area immediately. Persons entering the contaminated area to correct the problem or to determine whether it is safe to resume normal activities must comply with all instructions in the Exposure Controls / Personal Protection section.
Spill Management	Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls / Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations. If heated material is spilled, allow it to cool before proceeding with disposal methods.
Reporting	Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7. HANDLING AND STORAGE

Handling	Use normal precautions when handling hot, molten liquid solutions. Do not breathe fumes or vapor from heated material. Do not allow hot material to contact skin. Wash thoroughly after handling, and before smoking, eating, drinking, etc.
Storage	This material is typically stored, transported and used at temperatures between 135°C (275°F) and 183°C (360°F). Do not use or store near heat, sparks, or open flames.

Use or store only in a well-ventilated area. Keep container closed when material is not in use. **DO NOT ADD OR ALLOW WATER TO MIX WITH HOT ASPHALT.** Steam generated eruptions may occur. **STORE AND TRANSPORT ASPHALT ONLY IN PROPERLY VENTED CONTAINERS.** Combustion of asphalt and asphalt vapors may occur. **DO NOT MISHANDLE ASPHALT EQUIPMENT.** Observe manufacturer's guidelines on proper equipment use.

Static Hazard

Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating an accumulation of electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to OSHA Standard 29 CFR 1910.106, 'Flammable and Combustible Liquids,' National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity,' and/or the American Petroleum Institute (API) Recommended Practice 2003, 'Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents.'

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Engineering controls are normally required when handling hot materials. Use process enclosures, local exhaust ventilation, or other controls to maintain airborne levels below recommended exposure limits (see below). Engineering controls should meet applicable requirements of the National Electrical Code (NEC) Standards. Ensure that an emergency eye wash station and safety shower are located near the workstation.

Personal Protective Equipment

Personal protective equipment should be selected based upon the conditions under which this material is used. A hazard assessment of the work area for PPE requirements should be conducted by a qualified professional pursuant to OSHA regulations. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required. This recommendation reflects minimum PPE when product is at elevated temperatures.



Eye Protection

Use a full-face shield and chemical safety goggles if handling heated material. With product at ambient temperatures, safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Keep a suitable eye wash station immediately available to the work area.

Hand Protection

When handling product at elevated temperatures, use long-cuffed leather or heat-resistant gloves. When product is at ambient temperatures, use gloves constructed of chemical resistant materials such as heavy nitrile rubber if frequent or prolonged contact is expected.

Body Protection Prevent skin contact when handling heated material. Use insulated, heat-resistant clothing such as a chemical resistant apron or slicker suit. Use a full-body heat-resistant or internally cooled suit when work conditions dictate.

Respiratory Protection Contaminant air concentrations determine the level of respiratory protection required. Use only NIOSH-approved respiratory equipment within the limits of the protection factors for that equipment. Use supplied air respirators when H₂S concentrations are expected to exceed applicable workplace exposure levels. Do not use air purifying respiratory equipment when considering elevated H₂S concentrations. Respiratory equipment must be selected on the basis of the maximum expected air concentration.

General Comments Use good personal hygiene practices. Wash hands and other exposed skin areas with plenty of mild soap and water before eating, drinking, smoking, use of toilet facilities, or leaving work. DO NOT use gasoline, kerosene, solvents, or harsh abrasive skin cleaners.

Occupational Exposure Guidelines

Substance	Applicable Workplace Exposure Levels
Asphalt	ACGIH TLV (United States) TWA: 0.5 mg/m ³ 8 hour (s)
Hydrogen Sulfide	ACGIH TLV (United States) TWA: 10 ppm 8 hour (s) STEL: 15 ppm 15 minute (s)
	OSHA (United States) CEIL: 20 ppm 8 hour (s) STEL: 50 ppm 15 minute (s). Form: *10 minute peak; once per 8 hour shift.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Attention: The data below are typical values and do not constitute a specification.

Color: Black	Physical State: Semi-solid	Odor: Characteristic, sour, tar-like odor
pH: NA	Vapor Pressure: <0.01 psia	Vapor Density (Air = 1): >1
Boiling Point: >650°F	Solubility: Insoluble in cold water	Melting Point: 100 - 200°F (Softening Point)
Specific Gravity: 0.96 - 1.04 @ 15.6°C	Viscosity: 50 - 20000 poise @ 140°F	

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Incompatibility With Other Materials: May react with strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

Hazardous Decomposition Products: Hydrogen Sulfide (Elevated Temperatures)

Hazardous Polymerization: Hazard polymerization will not occur.

Conditions to Avoid: Keep away from extreme heat, strong acids, and strong oxidizing conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

IMMEDIATE HEALTH EFFECTS

The following hazards are based on evaluation of data for similar materials or product components:

Eye Irritation

Acute Dermal Toxicity

Skin Irritation

Acute Oral Toxicity

Skin Sensitization

Acute Inhalation Toxicity

ADDITIONAL TOXICOLOGY INFORMATION

There is concern about the carcinogenicity of chemical compounds found in asphalts.. The International Agency for Research on Cancer (IARC) reviewed the carcinogenic potential of asphalts in 1985 and again in 1987. At that time, they concluded there was inadequate evidence to decide that asphalts were carcinogenic to humans. Overall, findings from health monitoring studies of asphalt workers are not conclusive. However, asphalt fume condensates and certain chemical components of asphalt fume have been shown to cause cancer in mice when repeatedly applied to the skin and allowed to remain on the skin for a prolonged period of time. In addition, asphalt fume condensates have been shown to be weakly positive in Ames mutagenicity tests. Skin contact and breathing of fumes, mists and vapors should be reduced to a minimum.

SECTION 12. ECOLOGICAL INFORMATION

ECOTOXICITY

This material is not expected to harmful to aquatic organisms. However, spills into waterways may be harmful to benthic organisms and bottom feeders.

ENVIRONMENTAL FATE

This material is not expected to present an environmental problem.

SECTION 13. DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

SECTION 14. TRANSPORT INFORMATION

The shipping description below may not represent requirements for all modes of transportation, shipping methods or locations outside the United States.

DOT Shipping Name: ELEVATED TEMPERATURE LIQUID, N.O.S.

DOT Hazard Class: 9 (Miscellaneous)
DOT Identification Number: UN 3257
DOT Packing Group: III
Emergency Response Guide No.: 130

Placard:



SECTION 15. REGULATORY INFORMATION

SARA 311 / 312 CATEGORIES:

- | | |
|---------------------------------------|-----|
| 1. Immediate (Acute) Health Effects: | NO |
| 2. Delayed (Chronic) Health Effects: | YES |
| 3. Fire Hazard: | NO |
| 4. Sudden Release of Pressure Hazard: | NO |
| 5. Reactivity Hazard: | NO |

CHEMICAL INVENTORIES:

All of the components of this material are on the Toxic Substances Control Act (TSCA) Chemical Inventory

SECTION 16. ADDITIONAL INFORMATION

Scale For NFPA and HMIS Ratings:

0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:-Personal Protective Equipment Index Recommendation, *-Chronic Effect Indicator. These values are obtained using the guidelines or published evaluations prepared by the National Fire Protections Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
NA - Not Applicable	CAS - Chemical Abstract Service Number
NDA - No Data Available	

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