



# 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 (H<sub>2</sub>S)! 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, H<sub>2</sub>S 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 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 ( $H_2S$ ) 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:  $>232^{\circ}C$  ( $>450^{\circ}F$ ).

**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 not in use. DO NOT ADD OR ALLOW WATER TO MIX WITH ASPHALT CEMENT. Steam generated eruptions may occur. STORE AND TRANSPORT ONLY IN PROPERLY VENTED CONTAINERS. Combustion of asphalt vapors may occur. DO NOT MISHANDLE ASPHALT CEMENT. Follow the manufacturer's guidelines on proper equipment use.

#### Static Hazard

Electrostatic charge may accumulate and create a hazardous condition with this material. To minimize this hazard, bonding and grounding of equipment may not, by themselves, be sufficient. Review all operations which involve the use of generating an accumulation of electrostatic charge and/or a static hazard (including tank and container filling, splash filling, tank cleaning, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures. For more information, refer to NFPA 704, CFR 1910.106, 'Flammable and Combustible Liquids,' National Fire Protection Association (NFPA 77, 'Recommended Practice on Static Electricity'), and the American Petroleum Institute (API) Recommended Practice 2003, 'Guidelines for Prevention of Static Discharges and Stray Currents.'

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

#### Engineering Controls

Engineering controls are normally required when handling hot asphalt cement. Enclosures, local exhaust ventilation, or other controls to maintain airborne concentrations below recommended exposure limits (see below). Engineering controls should meet applicable requirements of the National Electrical Code (NEC) and OSHA 1910.151 that an emergency eye wash station and safety shower are located near the work area.

#### Personal Protective Equipment

Personal protective equipment should be selected based upon the hazard which this material is used. A hazard assessment of the work area and the tasks to be performed should be conducted by a qualified professional pursuant to OSHA 1910.132. The following pictograms represent the minimum requirements for personal protective equipment. For certain operations, additional PPE may be required. The recommendation reflects minimum PPE when product is at elevated temperatures.



#### Eye Protection

Use a full-face shield and chemical safety goggles if handling hot asphalt cement at ambient temperatures, safety glasses equipped with side shields are recommended as minimum protection in industrial settings. Keep a safety shower immediately available to the work area.

#### Hand Protection

When handling product at elevated temperatures, use long-cuff heat-resistant gloves. When product is at ambient temperatures, use chemical resistant materials such as heavy nitrile rubber if frequent contact is expected.

**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**

**Skin Irritation**

**Skin Sensitization**

**Acute Dermal Toxicity**

**Acute Oral Toxicity**

**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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