

PIONEER ASPHALT CORPORATION

MATERIAL SAFETY DATA SHEET  
May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements

U.S. DEPARTMENT OF LABOR  
Occupational Safety and Health  
Administration  
Form Approved  
OMB No. 1218-0072

IDENTITY Pioneer 412-M (2% CALCIUM CARBONATE ADDED)

Section I

Manufacturer's Name & Address  
Pioneer Asphalt Corporation  
802 Ash St.  
Lawrenceville, Illinois 62439  
Date Prepared 8/19/93

Emergency Telephone Number  
618/943-3341  
Telephone Number for Information  
618/943-3341

Section II - Hazardous Ingredients/Identity Information NE=Not Established

Specific Chemical Identity: Common Name(s) Other Limits  
OSHA PEL ACGIH TLV RECOMMENDED % OPTIONAL  
CAS# 1317-65-3 <3%

Asphalt Fumes CAS# 8052-42-4 N.E. 5mg/m<sup>3</sup> 5mg/m<sup>3</sup>  
CAS # Product - 64742-93-4 (Oxidized Asphalt)

This product contains the following chemicals subject to the reporting  
requirements of SARA 313 and 40 CFR 372, 313, 311, 312. NONE  
HMIS (Product) H-0 F-1 R-0

Section III - Physical/Chemical Characteristics

Boiling Point Deg. F. 650 Specific Gravity (H<sub>2</sub>O=1) Typical 1.0  
Vapor Pressure (mm Hg) @ 20 Deg C. <0.1 Melting Point Deg F (Ring & Ball) 243-257  
Vapor Density (Air=1) >5 Deg C 117-125  
Evaporation Rate (Toluene=1) @ 77 Deg F <0.01  
Solubility in Water @ 25 Deg C <0.1  
Appearance and Odor Solid at Room Temperature, Black-granular, No odor-cold

Section IV - Fire and Explosion Hazard Data (Vol. % of vapors in air)

Flash Point (Method Used) C.O.C. 600 + Deg. F. Flammable Limits LEL UEL  
1 7

Extinguishing Media

Foam, water spray, (fog), Dry Chemical, CO<sub>2</sub>

Special Fire Fighting Procedures

Minimum breathing of vapors, gasses, fumes or decomposition products, use  
supplied air breathing equipment for enclosed or confined spaces.

Unusual Fire and Explosion Hazards

When heated above flash point, material will release flammable vapors which  
can burn or be explosive in confined spaces if ignited. Do not mix with  
strong oxidants such as liquid chlorine and concentrated oxygen.  
Possibility of explosion exists under dusty conditions, avoid dusting when  
handling & avoid all sources of ignition.

Section V - Reactivity Data

Stability Unstable Conditions to Avoid  
Stable X Do not overheat, auto-ignition may occur if  
heated beyond 600 Deg F

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Incompatibility (materials to avoid)

May react with strong oxidizing materials

Hazardous Decomposition or Byproducts

Carbon monoxide, carbon dioxide, oxides of sulfur & nitrogen are possible under extreme uncontrolled fire.

Hazardous	May Occur	Conditions to Avoid
Polymerization	Will Not Occur <u>X</u>	None Known

Section VI - Health Hazard Data

Route of entry:	Inhalation?	Skin?	Ingestion?
	yes	yes	Not normally

Health Hazards (Acute & Chronic)

The cool solid material is not expected to cause eye or skin irritation, nor is it expected to have acute systemic toxicity by ingestion. See page 3 for hot material health effects.

Carcinogenicity:	NTP?	IARC MONOGRAPHS?	OSHA Regulated?
	No	See Page 3	No

Signs and Symptoms of Exposure

Upper respiratory tract, eye and skin irritation. Fumes from hot material may cause nausea and irritation of upper respiratory tract.

Medical Conditions Generally Aggravated by Exposure

None Known

Emergency and First Aid Procedures

See Page 3

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled.

Eliminate ignition sources. Recover free product. Add sand, earth, or other suitable absorbent to spill area. Let cool. Scrape up into suitable containers.

Waste Disposal Method

Dispose of in accordance with local state and federal regulations.

Precautions to Be Taken in Handling and Storing

Avoid open flames, Health Studies have shown that many petroleum hydrocarbons pose potential human health risks which may vary from person to person.

Other Precautions

Minimize breathing vapor mist and fumes. Avoid prolonged and repeated contact with skin.

Section VIII - Control Measures

Respiratory Protection (Specify Type)

Use supplied air respirator in confined areas or when vapors exceed TLV Limits

Ventilation	Local Exhaust	Special
	in Enclosed areas	None
	Mechanical (General)	Other
	in Enclosed areas	None

Protective Gloves

Insulated for hot material

Eye Protection

Safety glasses or face shield

Other Protective Clothing or Equipment

Long sleeves and impervious clothing for hot materials

Work/Hygienic Practices

See Section VII

## ADDITIONAL HEALTH DATA

No association has been established between industrial exposure to petroleum asphalt and cancer in humans. The International Agency for Research on Cancer (IARC) has recently reviewed the carcinogenic potential of asphalts. They concluded that there was insufficient evidence that undiluted, air-refined asphalt was carcinogenic to animals, while there was only limited evidence that steam-refined asphalts were carcinogenic to animals. Additionally, there was insufficient evidence to conclude that asphalts were carcinogenic to human beings. Studies in which mice were exposed to a variety of whole asphalts did not result in any increased cancer rate; mice exposed to asphalts diluted with hydrocarbon solvents had increased incidence of certain types of cancer. Brief or intermittent skin contact with this asphalt product is not expected to produce any serious effects. While normal handling of this product is not likely to cause cancer in humans, skin contact and breathing of mists, fumes or vapors should be reduced to a minimum. We strongly recommend that the precautions outlined in this MSDS be followed when handling this material.

Some asphalts contain sulfur compounds which may form H S when heated. The rotten egg odor of H S is unreliable as an indicator of concentration because it may be entirely masked by the odor of the asphalt. Signs and symptoms of overexposure to H S include respiratory tract irritation, headaches, dizziness, nausea, gastrointestinal disturbances, coughing a sensation of dryness and pain in the nose, throat and chest, confusion and unconsciousness. H S concentrations of 1000-2000 ppm can be extremely hazardous. Death has occurred following exposure to 600 ppm.

EMERGENCY & FIRST AID PROCEDURES

EYES: If the hot material should splash into the eyes, flush eyes immediately with fresh water while holding the eyelids open. See a doctor.

SKIN: If the hot, melted material gets on skin, quickly cool in 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: If there are signs or symptoms as described in this MSDS due to breathing this material, move the person to fresh air. If breathing has stopped, apply artificial respiration. Call a doctor.

INGESTION: Since this material is not expected to be an ingestion problem, no first aid procedures are required.

Tim Reeder, R&D Lab Technician

