

Section 1 - Product and Company Identification

Hazard Label CAUTION

Company Information

Johns Manville
Roofing Systems
P.O. Box 5108
Denver, CO 80127 USA

Telephone: 303-978-2000 8:00AM-5:00PM M-F
Internet Address: <http://www.jm.com>
Emergency: 800-424-9300 (Chemtrec, In English)

Trade Names: Asphalt Type II; Asphalt Type III; Asphalt Type IV

Section 2 - Hazards Identification

Inhalation

Irritation of the upper respiratory tract (scratchy throat), coughing, and congestion may occur in extreme exposures.

Skin

When asphalt is heated it can cause severe thermal burns.

Ingestion

This product is not intended to be ingested or eaten under normal conditions of use. If ingested, seek medical attention.

Eyes

When asphalt is heated it can cause severe thermal burns.

Primary Routes of Entry (Exposure)

Inhalation, skin, and eye contact.

Target Organs

Nose (nasal passages), throat, lungs, skin, eyes

Medical Conditions Aggravated by Exposure

Pre-existing chronic respiratory, skin, or eye diseases or conditions.

Section 3 - Composition/Information on Ingredients

CAS #	Component	Percent
64742-93-4	Oxidized petroleum asphalt	100
7783-06-4	Hydrogen sulfide gas	*

Component Information

*Fumes are released when product is heated.

General Product Description

Dark brown to black solid. Asphalt odor.

Section 4 - First Aid Measures

First Aid: Inhalation

Remove to fresh air. If symptoms persist contact a physician.

First Aid: Skin

DO NOT use solvents or thinners to remove materials from skin. Asphalt can be removed with vegetable oil or mineral oil.

Hot asphalt on skin: Before attempting to remove hot asphalt from skin, immediately cool with cool water or ice. Cover with petroleum jelly and then clean. For large or severe burns see a medical professional.

First Aid: Ingestion

Product is not intended to be ingested or eaten. If this product is ingested, do not induce vomiting and seek medical attention immediately.

First Aid: Eyes

Flush eyes with large amounts of water until irritation subsides. If irritation persists, seek medical attention.

First Aid: Notes to Physician

DO NOT use solvents or thinners to remove materials from skin. Asphalt can be removed with vegetable oil or mineral oil. Hot asphalt on skin: Before attempting to remove hot asphalt from skin, immediately cool with cool water or ice. Cover with petroleum jelly and then clean. If the patient is suspected of being overcome by hydrogen sulfide gas, the suggested treatment includes the use of nitrites.

Section 5 - Fire Fighting Measures**Flash Point:** 232°C/450°F**Upper Flammable Limit (UFL):** Not determined**Auto Ignition:** 371°C/700°F**Rate of Burning:** Not determined**General Fire Hazards**

If hot asphalt comes into contact with water, spattering or explosion may occur.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide, partially oxidized hydrocarbons, and traces of hydrogen sulfide.

Extinguishing Media

Carbon dioxide (CO₂), dry chemical.

Fire Fighting Equipment/Instructions

Use NIOSH-approved self-contained breathing apparatus operating in the pressure demand mode and full fire fighting protective clothing. Avoid inhalation of vapors.

Method Used: COC**Lower Flammable Limit (LFL):** Not determined**Flammability Classification:** Not determined**Section 6 - Accidental Release Measures****Containment Procedures**

If material is hot, let it cool. In well ventilated area, shovel solid material into containers.

Clean-Up Procedures

Place in closable container for disposal.

Section 7 - Handling and Storage**Handling Procedures**

Use protective equipment as described in Section 8 of this safety data sheet when handling uncontained material. Handle in accordance with good industrial hygiene and safety practices.

Storage Procedures

Warehouse storage should be in accordance with package directions, if any. Material should be kept clean, dry, and in original packaging.

Section 8 - Exposure Controls / Personal Protection**Exposure Guidelines****A: General Product Information**

Protective equipment should be provided as necessary to prevent inhalation of vapors, prolonged skin contact, and to keep exposure levels below the applicable exposure limits.

B: Component Exposure Limits**Oxidized petroleum asphalt (64742-93-4)**

ACGIH: 0.5 mg/m³ TWA (fume, inhalable fraction, as benzene soluble aerosol)

Hydrogen sulfide gas (7783-06-4)

OSHA: 10 ppm TWA; 14 mg/m³ TWA

ACGIH: 10 ppm TWA

15 ppm STEL

PERSONAL PROTECTIVE EQUIPMENT**Personal Protective Equipment: Eyes/Face**

Safety glasses with side shields, chemical goggles, or a face shield is required.

Personal Protective Equipment: Skin

Leather or other insulated gloves are required when handling hot asphalt.

Personal Protective Equipment: Respiratory

A NIOSH approved respirator must be used if vapor concentrations exceed exposure limits.

Ventilation

Local exhaust or general dilution ventilation may be required to maintain exposures below the applicable exposure limits. The need for ventilation systems should be evaluated by a professional industrial hygienist, while the design of specific ventilation systems should be conducted by a professional engineer.

Personal Protective Equipment: General

Protective equipment should be provided as necessary to prevent irritation of the throat, eyes, and skin, and to keep exposures below the applicable exposure limits identified in Section 8.

Section 9 - Physical & Chemical Properties

Appearance:	Dark brown to black solid	Odor:	Asphalt
Physical State:	Solid	pH:	Not applicable
Vapor Pressure:	Not applicable	Vapor Density:	>1
Boiling Point:	343-538°C/650-1000°F	Melting Point:	57-66°C/135-150°F
Solubility (H₂O):	Nil	Specific Gravity:	Variable
Freezing Point:	Not applicable	Evaporation Rate:	Not applicable
Viscosity:	100-300cSt @ (177°C/350°F)	Percent Volatile:	0
VOC:	Not determined		

Section 10 - Stability & Reactivity Information**Stability**

These products are not reactive.

Incompatibility

Material is incompatible with strong oxidizers.

Hazardous Decomposition

Carbon monoxide, carbon dioxide, oxidized hydrocarbons and traces of hydrogen sulfide.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information**Component Analysis - LD50/LC50****Oxidized petroleum asphalt (64742-93-4)**

Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit:>2000 mg/kg

Hydrogen sulfide gas (7783-06-4)

Inhalation LC50 Rat: 0.701 mg/L/4H; Inhalation LC50 Rat:0.99 mg/L/1H

Component Carcinogenicity**Oxidized petroleum asphalt (64742-93-4)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen (fume, coal tar-free)

IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Supplement 7 [1987], Monograph 35 [1985] (extracts of steam-refined and air-refined))

Chronic Toxicity

Asphalt (asphalt CAS # 8052-42-4 and oxidized asphalt 64742-93-4; bitumens): In 1985/87, IARC (International Agency for Research on Cancer) concluded the following: (a) Bitumens are not classifiable as to their carcinogenicity to humans (Group 3). (b) Extracts of steam- and air-refined bitumens are possibly carcinogenic to humans (Group 2B). IARC found that evidence for carcinogenicity from animal studies was: inadequate for undiluted air-refined bitumens; limited for steam-refined and cracking-residue bitumens; sufficient for extracts of steam-refined and air-refined bitumen. IARC found that human evidence for carcinogenicity of asphalt fumes was inadequate. Studies of roofers indicated an excess of cancers; however, IARC concluded that, since roofers may be exposed also to coal-tar pitches and other materials, "the excess cancer risk cannot be attributed specifically to bitumens." In 1994, a published review of 20 epidemiology studies of asphalt workers and roofers agreed with IARC, that current human evidence is inadequate for the carcinogenicity of asphalt fumes in humans. Trace amounts of polynuclear aromatic hydrocarbons (PAHs) may be present in some asphalts and can be released upon excessive heating, which results in thermal cracking of the asphalt compounds. Some of these PAHs have been identified as having the potential to induce carcinogenic and reproductive health effects.

Section 12 - Ecological Information**Ecotoxicity****A: General Product Information**

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity**Oxidized petroleum asphalt (64742-93-4)**

72 Hr EC50 Selenastrum capricornutum: 56 mg/L

Hydrogen sulfide gas (7783-06-4)

96 Hr LC50 Lepomis macrochirus: 0.0448 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 0.016 mg/L [flow-through]

96 Hr EC50 Gammarus pseudolimnaeus: 0.022 mg/L

Section 13 - Disposal Considerations**US EPA Waste Number & Descriptions****General Product Information**

This product is not expected to be a hazardous waste when it is disposed of according to the U.S. Environmental Protection Agency (EPA) under Resource Conservation and Recovery Act (RCRA) regulations. Product characterization after use is recommended to ensure proper disposal under federal and/or state requirements.

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

Section 14 - Transport Information**International Transport Regulations**

These products are not classified as dangerous goods according to international transport regulations.

Section 15 - Regulatory Information**Component Analysis**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Hydrogen sulfide gas (7783-06-4)

SARA 302: 500 lb TPQ

CERCLA: 100 lb final RQ; 45.4 kg final RQ

State Regulations**A: General Product Information**

Asphalt fumes may contain trace amounts of the following California Proposition 65 Listed Substances as known to the state of California to cause cancer or reproductive effects: Poly nuclear aromatic hydrocarbons (benz(a)anthracene, benzo(b)fluoranthene, benzo(j)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene).

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Oxidized petroleum asphalt (related to Asphalt)	64742-93-4	Yes ¹	No	Yes ¹	Yes ¹	Yes	Yes ¹
Hydrogen sulfide gas	7783-06-4	Yes	No	Yes	Yes	Yes	Yes

A: TSCA Status

This product and its components are listed on the TSCA 8(b) inventory.

None of the components listed in this product are listed on the TSCA Export Notification 12(b) list.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Oxidized petroleum asphalt	64742-93-4	Yes	Yes	Yes
Hydrogen sulfide gas	7783-06-4	Yes	Yes	Yes

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

WHMIS Classification

Controlled Product Classification: D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations. This SDS contains all the information required by the Controlled Products Regulations.

Section 16 - Other Information

Other Information

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The information herein is presented in good faith and believed to be accurate as of the effective date given. However, no warranty, expressed or implied, is given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

Date	MSDS #	Reason
08/01/00	3121-1.0000	New MSDS authoring system.
10/01/01	3121-1.0001	deleted SARA 313 per LOLI 2000-4
04/16/02	3121-1.0002	Sect. 8 updated for ACGIH exposure limit. Sect. 11 revised for IARC Group 3 classification.
05/10/04	3121-1.0003	Regulatory update. Minor edits.
07/05/06	3121-1.0004	Section 14 Transportation update to include information for shipment of HOT material for all modes.
03/13/09	3121-1.0005	SDS updated to GHS format. Transportation section updated as JM does not ship hot asphalt.

End of Sheet 3121