

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:

1/2" Retro-Fit™ Board;
Cant Board;
DuraBoard®;
Fes-Cant;
Tapered Fesco® Edge Strip;

FesCant™ Plus;
Fesco® Board HD;
Fesco® Board;
High Density Single Ply Board;

Laminator Board;
RetroPlus;
Tapered Cant Strip;
Tapered Fesco® Board

Section 2 - Hazards Identification

Emergency Overview

Product dust may cause mechanical irritation of skin and mucous membranes.

Inhalation

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

Skin

Temporary irritation (itching) or redness may occur.

Ingestion

This product is not intended to be ingested (eaten). If ingested, it may cause temporary irritation to the gastrointestinal (digestive) tract.

Eyes

Temporary irritation (itching) or redness may occur.

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
93763-70-3	Perlite, expanded	35-75
65996-61-4	Cellulose fiber	20-50*
64742-93-4	Asphalt, oxidized	3-20
9005-25-8	Starch	1-11
Not Available	Polymeric latex	0-10**
1344-09-8	Sodium silicate	0-1.0**

Component Information

* Recycled newsprint.

** Component of DuraBoard, Fesco Board HD, and High Density Single Ply Board only.

General Product Description

Brown to light brown board.

Section 4 - First Aid Measures

First Aid: Inhalation

If dust is inhaled in excess of exposure limits referenced in section 8 of this safety data sheet, remove individual to fresh air. Drink water to clear throat, and blow nose to remove dust.

First Aid: Skin

Wash gently with soap and water to remove dust. Should irritation persist, seek medical attention.

First Aid: Ingestion

Rinse mouth with water to remove dust and drink plenty of water to help reduce irritation. If irritation persists, seek medical attention.

First Aid: Eyes

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

First Aid: Notes to Physician

Dust from the product may cause mechanical irritation of the eyes, skin, and upper respiratory tract. Treat symptomatically.

Section 5 - Fire Fighting Measures

Flash Point: Not applicable

Upper Flammable Limit (UFL): Not determined

Auto Ignition: Not determined

Rate of Burning: Not determined

General Fire Hazards

There is no potential for spontaneous fire or explosion.

Fire Fighting Equipment/Instructions

No special procedures are expected to be necessary for this product. Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases.

Method Used: Not applicable

Lower Flammable Limit (LFL): Not determined

Flammability Classification: Not determined

Section 6 - Accidental Release Measures**Clean-Up Procedures**

Pick up large pieces. Vacuum dusts. If sweeping is necessary, use a dust suppressant such as water. Do not dry sweep dust accumulation. These procedures will help to minimize potential exposures.

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**A: Component Exposure Limits****Perlite, expanded (93763-70-3)**

OSHA: 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

Asphalt, oxidized (64742-93-4)

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

Starch (9005-25-8)

OSHA: 15 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)

ACGIH: 10 mg/m³ TWA

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

Safety glasses with side shields are recommended to keep dust out of the eyes.

Personal Protective Equipment: Skin

Leather or cotton gloves should be worn to protect against mechanical abrasion.

Personal Protective Equipment: Respiratory

A respirator should be used if ventilation is unavailable, or is inadequate for keeping dust levels below the applicable exposure limits referenced in Section 8 of this SDS. Wear a NIOSH-certified disposable or reusable particulate respirator with an efficiency rating of N95 or higher (per 42 CFR 84) when dust concentrations exceed the applicable exposure limits. Operations such as sawing, blowing, tear out, and spraying may generate airborne dust concentrations requiring a higher level of respiratory protection. For exposures up to 50 times the established exposure limits use a full-face respirator, rated N99 or higher.

Ventilation

In fixed manufacturing settings, local exhaust ventilation should be provided at areas of cutting, milling or other processing to remove airborne dust.

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: Brown to light brown board. Physical State: solid Vapor Pressure: Not applicable Boiling Point: Not applicable Solubility (H₂O): Negligible Freezing Point: Not determined Evaporation Rate: Not applicable Percent Volatile: Negligible	Odor: Asphalt odor pH: Not applicable Vapor Density: Not applicable Melting Point: Not applicable Specific Gravity: 0.2 Solids Content: Not applicable Viscosity: Not applicable VOC: Not determined
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Section 10 - Stability & Reactivity Information
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Stability

These products are not reactive.

Hazardous Decomposition

None identified.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information

Acute Toxicity**A: General Product Information**

Dust from this product is a mechanical irritant, which means that it may cause temporary irritation or scratchiness of the throat, and/or itching of the eyes and skin.

B: Component Analysis - LD50/LC50**Perlite, expanded (93763-70-3)**

Oral LD50 Mouse: 12960 mg/kg

Asphalt, oxidized (64742-93-4)

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

Sodium silicate (1344-09-8)

Oral LD50 Rat: 1153 mg/kg; Dermal LD50 Rabbit: >4640 mg/kg

Component Carcinogenicity**Asphalt, oxidized (64742-93-4)**

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

IARC: Group 3 - Not Classifiable (IARC Supplement 7 [1987], Monograph 35 [1985] (steam-refined cracking-residue and air-refined))

Starch (9005-25-8)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

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**

Not expected to be dangerous to the environment.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity**Asphalt, oxidized (64742-93-4)**

72 Hr EC50 *Selenastrum capricornutum*: 56 mg/L

Sodium silicate (1344-09-8)

96 Hr LC50 *Lepomis macrochirus*: 301-478 mg/L; 96 Hr LC50 *Brachydanio rerio*: 3185 mg/L [semi-static]

96 Hr EC50 *Daphnia magna*: 216 mg/L

Section 13 - Disposal Considerations**US EPA Waste Number & Descriptions****A: 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.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

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**US Federal Regulations****A: General Product Information**

SARA 311/312: This product is not classified as hazardous under SARA 311/312.

B: Component Analysis

None of this products components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

State Regulations**A: General Product Information**

Other state regulations may apply. Check individual state requirements.

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
Perlite, expanded	93763-70-3	No	No	Yes	Yes	Yes	Yes
Asphalt, oxidized (related to Asphalt)	64742-93-4	Yes ¹	No	Yes ¹	Yes ¹	Yes	Yes ¹
Starch	9005-25-8	No	No	Yes	Yes	No	Yes

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.

International Regulations**A: General Product Information**

These products are considered articles under both U.S. and international product regulations and as such, these products do not require registration or notification on the various country-specific inventories.

B: Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

WHMIS Classification

This is not a WHMIS controlled product. 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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Prepared by:
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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
7/1/00	3002-1.0000	New MSDS Authoring System
10/27/00	3002-1.0100	Sect. 1, Trade names deleted: NordBoard and Sorbents. Deleted crystalline silica & other components (sect. 2) and regulatory information (sect. 8, 11, & 15) for these products.
04/25/02	3002-1.0101	Sect. 1 - added trade names: Fesco Board HD and High Density Single Ply Board. Sect. 2 - CAS# added for latex and perlite. Sect. 8 & 11 - added regulatory info. for latex, perlite, and asphalt.
10/16/02	3002.1.0102	Update Sect. 11: IARC classification of asphalt fume as Group 3 Not classifiable as a human carcinogen.
04/06/04	3002-1.0103	Minor edits throughout MSDS.
05/10/04	3002-1.0104	Regulatory update. Minor edits.
12/15/05	3002-1.0105	Regulatory update. Minor edits to Section 11 LD50.
07/10/06	3002-1.0106	Addition of FesCant Plus to trade names.
10/04/2007	3002-1.0107	Regulatory update. Minor changes throughout.
01/29/10	3002-1.0108	Regulatory update. Updated SDS to GHS format.
02/12/10	3002-1.0109	Updated trade names and trademarks.
04/29/10	3002-1.0110	Addition of RetroPlus to trade names.

End of Sheet 3002