Section 1 - Product and Company Identification

Hazard Label: None Required

Company Information
Johns Manville
Insulation Systems
P.O. Box 5108
Denver, CO 80127 USA

Trade Names:
- Foil Facing
- Kraft Asphalt Facing (KFBI)
- Kraft MR™ Asphalt Facing (KFBI-MR™)
- MR™ Cap Sheet
- Spider™ MR™ Facing

Section 2 - Hazards Identification

Inhalation
Temporary mechanical irritation may occur upon exposure to dust released from cutting this product.

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 mechanical irritation may occur upon exposure to dust released from cutting this product.

Primary Routes of Entry (Exposure)
- Inhalation
- Skin
- 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

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>Kraft paper</td>
<td>40-65</td>
</tr>
<tr>
<td>8052-42-4</td>
<td>Asphalt</td>
<td>32-40</td>
</tr>
<tr>
<td>7429-90-5</td>
<td>Aluminum foil</td>
<td>0-20</td>
</tr>
<tr>
<td>1344-09-8</td>
<td>Sodium silicate</td>
<td>0-5</td>
</tr>
</tbody>
</table>

General Product Description
Brown paper coated on one side with asphalt. Foil facing has aluminum foil laminated to the kraft paper. Slight asphalt odor.

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 exposed skin with soap and water. If irritation develops or persists, 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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper Flammable Limit (UFL)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto Ignition</td>
<td>Not determined</td>
</tr>
<tr>
<td>Rate of Burning</td>
<td>Not determined</td>
</tr>
<tr>
<td>General Fire Hazards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There is no potential for spontaneous fire or explosion.</td>
</tr>
<tr>
<td>Fire Fighting Equipment/Instructions</td>
<td>Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases.</td>
</tr>
</tbody>
</table>

Section 6 - Accidental Release Measures

Containment Procedures
- Vacuum dusts. If sweeping is necessary, use a dust suppressant such as water. Do not dry sweep dust accumulation or use compressed air for clean-up. These procedures will help to minimize potential exposures.

Clean-Up Procedures
- No additional information available.

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

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH (TWA)</th>
<th>OSHA (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>0.5 mg/m³</td>
<td>15 mg/m³; 5 mg/m³</td>
</tr>
<tr>
<td></td>
<td>(fume, inhalable fraction, as benzene soluble aerosol)</td>
<td>(total dust); (respirable fraction)</td>
</tr>
<tr>
<td>Aluminum foil</td>
<td>1 mg/m³ (respirable fraction)</td>
<td>15 mg/m³; 5 mg/m³</td>
</tr>
</tbody>
</table>

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 paper, asphalt coating; may have foil facing.
Odor: Slight asphalt odor.

Physical State: solid
Vapor Pressure: Not applicable
Boiling Point: Not applicable
Solubility (H₂O): Nil
Freezing Point: Not applicable
Viscosity: Not applicable
VOC: Not applicable
pH: Not applicable
Vapor Density: Not applicable
Melting Point: Not applicable
Specific Gravity: Not applicable
Evaporation Rate: Not applicable
Percent Volatile: 0-7%

Section 10 - Stability & Reactivity Information

Stability
These products are not reactive.

Hazardous Decomposition
May form carbon dioxide, carbon monoxide, halogenated hydrocarbons, nitrogen oxides, various hydrocarbons.

Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Component Analysis - LD50/LC50
Asphalt (8052-42-4)
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 (8052-42-4)
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))

Aluminum foil (7429-90-5)
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
No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity
Sodium silicate (1344-09-8)
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
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).
Aluminum foil (7429-90-5)
SARA 313: 1.0 % de minimis concentration (dust or fume only)

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:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>CA</th>
<th>FL</th>
<th>MA</th>
<th>MN</th>
<th>NJ</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt</td>
<td>8052-42-4</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Aluminum foil</td>
<td>7429-90-5</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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
The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Minimum Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum foil</td>
<td>7429-90-5</td>
<td>1 %</td>
</tr>
</tbody>
</table>

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

Prepared for:
Johns Manville
Insulation Systems
P. O. Box 5108
Denver, CO USA 80217-5108

Prepared by:
Johns Manville Technical Center
P.O. Box 625005
Littleton, CO USA 80162-5005

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.

<table>
<thead>
<tr>
<th>Date</th>
<th>MSDS #</th>
<th>Reason</th>
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</thead>
<tbody>
<tr>
<td>08-01-00</td>
<td>2019-1.0000</td>
<td>New MSDS authoring system.</td>
</tr>
<tr>
<td>11/04/02</td>
<td>2019-1.0001</td>
<td>Update Sect. 11 for IARC classification of asphalt as Group 3 Not classified as to its carcinogenicity to humans.</td>
</tr>
<tr>
<td>12/05/03</td>
<td>2019.1.0002</td>
<td>Section 1 added Kraft MR Asphalt Facing (KFBI-MR). Sect. 16 division change from RID to BID, Sect. 1 product name change from Kraft Asphalt Facers to KFBI-MR.</td>
</tr>
<tr>
<td>05/10/04</td>
<td>2019-1.0003</td>
<td>Regulatory update. Minor edits.</td>
</tr>
<tr>
<td>05/25/05</td>
<td>2019-1.0004</td>
<td>Sect. 1 addition of MR Cap Sheet and Spider MR Facing. Minor edits to composition amounts.</td>
</tr>
<tr>
<td>10/05/09</td>
<td>2019-1.0005</td>
<td>Regulatory update. Updated SDS to GHS format. Added asphalt fumes to Prop 65 carcinogens in Section 15.</td>
</tr>
</tbody>
</table>

End of Sheet 2019