Section 1 - Product and Company Identification

Hazard Label DANGER

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

Trade Names: JM EPDM Lap Caulking
Use: Used for sealing the exposed edge of field fabricated EPDM membrane laps and can be used as a temporary nighttime sealant.

Section 2 - Hazards Identification

Emergency Overview
DANGER: Extremely flammable liquid and vapor. Vapor may cause flash fire. Use water spray to cool materials in or near a fire. Fire may be difficult to extinguish. Vapors may travel, and can be ignited by a remote source.

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

Skin
Drying of skin, dermatitis, and blistering may occur following prolonged exposures.

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

Eyes
Irritation, redness, and burning in eyes 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

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>64742-89-8</td>
<td>Solvent naphtha (petroleum), light aliphatic</td>
<td>27-31</td>
</tr>
<tr>
<td>1332-58-7</td>
<td>Kaolin</td>
<td>17-21</td>
</tr>
<tr>
<td>Trade Secret</td>
<td>Synthetic Rubber</td>
<td>11-15</td>
</tr>
<tr>
<td>8052-41-3</td>
<td>Stoddard solvent (mineral spirits)</td>
<td>11-15</td>
</tr>
<tr>
<td>7631-86-9</td>
<td>Silica, amorphous</td>
<td>8-12</td>
</tr>
<tr>
<td>Trade Secret</td>
<td>Process Oil</td>
<td>6-10</td>
</tr>
<tr>
<td>Trade Secret</td>
<td>Hydrocarbon Resin</td>
<td>6-10</td>
</tr>
<tr>
<td>1344-28-1</td>
<td>Aluminum oxide</td>
<td>6-10</td>
</tr>
<tr>
<td>9003-29-6</td>
<td>Polybutene homopolymer</td>
<td>3-7</td>
</tr>
<tr>
<td>1333-86-4</td>
<td>Carbon black</td>
<td>&lt;3</td>
</tr>
<tr>
<td>9003-27-4</td>
<td>Polysisobutylene</td>
<td>1-3</td>
</tr>
<tr>
<td>14808-60-7</td>
<td>Crystalline silica</td>
<td>&lt;1</td>
</tr>
<tr>
<td>1330-20-7</td>
<td>Xylenes</td>
<td>Proprietary</td>
</tr>
</tbody>
</table>

General Product Description
Black, aliphatic rubber-based sealant. Rubber odor

Section 4 - First Aid Measures

First Aid: Inhalation
If the affected person is having difficulty breathing, administer oxygen or apply artificial respiration and immediately contact a medical professional.
First Aid: Skin
Remove contaminated clothing. Wash exposed areas with soap and water. If irritation develops or persists, seek medical attention. Launder contaminated clothing before reuse.

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
Treatment for inhalation, skin contact, or ingestion should be symptomatic. Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias.

Section 5 - Fire Fighting Measures

Flash Point: 45°F
Method Used: SETA
Upper Flammable Limit (UFL): 7%
Lower Flammable Limit (LFL): 0.9%
Auto Ignition: Not determined
Flammability Classification: Flammable
Rate of Burning: Not determined

General Fire Hazards
DANGER: EXTREMELY FLAMMABLE liquid and vapor.
Keep away from heat, sparks, and flame. Material is highly volatile and readily gives off vapors which are heavier than air and may travel along the ground or be moved by ventilation and ignited by pilot lights, other flames, sparks heaters, smoking, electric motors, static discharge, or other ignition sources at locations distant from material handling point. Keep container closed. Use with adequate ventilation.

NFPA Rating: Health = 2  Fire = 3  Reactivity = 0

Hazardous Combustion Products
Carbon monoxide, carbon dioxide, halogenated hydrocarbons, nitrogen oxides, and various hydrocarbons.

Extinguishing Media
Carbon dioxide (CO₂), water, water fog, 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.

Section 6 - Accidental Release Measures

Containment Procedures
Remove all sources of ignition. Evacuate and ventilate spill area. Dam spill area with sand, earth, or other suitable absorbent. Prevent entry of material into sewers, other water sources, or land areas. Wear full protective clothing and respiratory protection during clean-up as required to maintain exposures below the applicable exposure limit. Shovel absorbed material into containers in well-ventilated area.

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. Product should be kept in a cool and dry area in original packaging. Do not freeze.

Section 8 - Exposure Controls / Personal Protection

A: Component Exposure Limits
Kaolin (1332-58-7)

ACGIH: 2 mg/m³ TWA (respirable fraction, particulate matter containing no asbestos and < 1% crystalline silica)
OSHA: 10 mg/m³ TWA (total dust); 5 mg/m³ TWA (respirable fraction)
Stoddard solvent (mineral spirits) (8052-41-3)
ACGIH: 100 ppm TWA
OSHA: 100 ppm TWA; 525 mg/m³ TWA

Aluminum oxide (1344-28-1)
ACGIH: 10 mg/m³ TWA (particulate matter containing no asbestos and <1% crystalline silica)
OSHA: 10 mg/m³ TWA (total dust); 5 mg/m³ TWA ( respirable fraction)

Carbon black (1333-86-4)
ACGIH: 3.5 mg/m³ TWA
OSHA: 3.5 mg/m³ TWA

Crystalline silica (14808-60-7)
ACGIH: 0.025 mg/m³ TWA (respirable fraction)
OSHA: 0.1 mg/m³ TWA (respirable dust)

Xylenes (1330-20-7)
ACGIH: 100 ppm TWA
150 ppm STEL
OSHA: 100 ppm TWA; 435 mg/m³ TWA
150 ppm STEL; 655 mg/m³ 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
Impervious gloves such as nitrile rubber should be used to help prevent excessive skin contact.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Black</td>
</tr>
<tr>
<td>Physical State</td>
<td>Semi-liquid</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>10.2 mm Hg</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>240-285°F (115.5-140.5°C)</td>
</tr>
<tr>
<td>Solubility (H₂O)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Slower than ethyl ether</td>
</tr>
<tr>
<td>Percent Volatile</td>
<td>40-45</td>
</tr>
<tr>
<td>Odor</td>
<td>Rubber odor</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>&gt;1</td>
</tr>
<tr>
<td>Melting Point</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.988 @ 77°F</td>
</tr>
<tr>
<td>Solids Content</td>
<td>~59.5</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>8.23 lbs/gal (liquid density)</td>
</tr>
<tr>
<td>VOC</td>
<td>422 g/L (3.390 lbs/gal) EPA protocol 24</td>
</tr>
</tbody>
</table>

Section 10 - Stability & Reactivity Information

Stability
These products are not reactive.

Stability: Conditions to Avoid
Keep away from ignition sources. Do not freeze. Do not thin.

Incompatibility
Strong acids, alkalis, and oxidizing agents
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

Solvent naphtha (petroleum), light aliphatic (64742-89-8)
Oral LD50 Rat: 5000 mg/kg; Dermal LD50 Rabbit: 3000 mg/kg

Silica, amorphous (7631-86-9)
Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Aluminum oxide (1344-28-1)
Oral LD50 Rat: >5000 mg/kg

Carbon black (1333-86-4)
Oral LD50 Rat: >15400 mg/kg; Dermal LD50 Rabbit: >3 g/kg

Crystalline silica (14808-60-7)
Oral LD50 Rat: 500 mg/kg

Xylenes (1330-20-7)
Inhalation LC50 Rat: 5000 ppm/4H; Oral LD50 Rat: 4300 mg/kg; Dermal LD50 Rabbit: >1700 mg/kg

Component Carcinogenicity

Kaolin (1332-58-7)
ACGIH: A4 - Not Classifiable as a Human Carcinogen

Silica, amorphous (7631-86-9)
IARC: Group 3 - Not Classifiable (IARC Monograph 68 [1997], Supplement 7 [1987])

Aluminum oxide (1344-28-1)
ACGIH: A4 - Not Classifiable as a Human Carcinogen

Carbon black (1333-86-4)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 93 posted, Monograph 65 [1996])

Crystalline silica (14808-60-7)
ACGIH: A2 - Suspected Human Carcinogen
NTP: Known Carcinogen (Select Carcinogen)
IARC: Group 1 - Known Human Carcinogen (IARC Monograph 68 [1997] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources)

Xylenes (1330-20-7)
ACGIH: A4 - Not Classifiable as a Human Carcinogen
IARC: Group 3 - Not Classifiable (IARC Monograph 71 [1999], Monograph 47 [1989])
Chronic Toxicity

Crystalline silica is considered a hazard by inhalation. The International Agency for Research on Cancer (IARC) has classified crystalline silica as a Group 1 substance, carcinogenic to humans. This classification is based on the findings of laboratory animal studies (inhalation and implantation) and epidemiology studies that were considered sufficient for carcinogenicity. Several studies have been conducted to determine the risk of cancer to workers exposed to dusts which contain crystalline silica. However, these studies did not consider other factors or elements that workers may be exposed to. Therefore, the causes of the excess deaths due to cancer could not be precisely determined. Further studies are being conducted to determine the risk of cancer when working with crystalline silica products. Excessive exposure to crystalline silica can cause silicosis, a non-cancerous lung disease.

Exposure to xylene can cause central nervous system, kidney, and liver damage. Repeated, prolonged skin contact will defat the skin, causing drying, cracking, and dermatitis.

### Section 12 - Ecological Information

#### Ecotoxicity

**A: General Product Information**

No data available for this product.

**B: Component Analysis - Ecotoxicity - Aquatic Toxicity**

- **Solvent naphtha (petroleum), light aliphatic (64742-89-8)**
  72 Hr EC50 Selenastrum capricornutum: 4700 mg/L

- **Silica, amorphous (7631-86-9)**
  96 Hr LC50 Brachydanio rerio: 5000 mg/L [static]
  72 Hr EC50 Selenastrum capricornutum: 440 mg/L
  48 Hr EC50 Ceriodaphnia dubia: 7600 mg/L

- **Carbon black (1333-86-4)**
  24 Hr EC50 Daphnia magna: >5600 mg/L

- **Xylenes (1330-20-7)**
  96 Hr LC50 Pimephales promelas: 13.4 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 8.05 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 16.1 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 26.7 mg/L [static]
  3 Hr EC50 Chlorella vulgaris: 105.1 mg/L (related to p-Xylene)
  24 hr EC50 Photobacterium phosphoreum: 0.0084 mg/L
  48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 Gammarus lacustris: 0.6 mg/L

### Section 13 - Disposal Considerations

#### US EPA Waste Number & Descriptions

**A: General Product Information**

This product is classified an ignitable hazardous waste by the Resource Conservation and Recovery Act (RCRA; 40 CFR 261: Waste # D001). Dispose of spilled material in accordance with federal, state, and local regulations in a hazardous waste facility. Empty containers must be handled with care due to product residue. Do not heat or cut empty containers with electric or gas torch. If you are unsure of the regulations, contact your local Public Health Department, or the local office of the Environmental Protection Agency (EPA).

**B: Component Waste Numbers**

- **Xylenes (1330-20-7)**
  - RCRA: waste number U239 (Ignitable waste, Toxic waste)

**Disposal Instructions**

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

### Section 14 - Transport Information

**International Transport Regulations**

- **DOT:**
  - Cartridges: Consumer Commodity ORM-D ERG 171
  - 5 gallon pails: UN1133, Adhesives, 3, PG II
  - Flammable Liquid Label Required
Section 15 - Regulatory Information

US Federal Regulations
A: General Product Information
SARA 311 Status. The following SARA 311 designations apply to this product: Immediate (acute) health hazard. Delayed (chronic) health hazard. Fire hazard.

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 oxide (1344-28-1)
SARA 313: 1.0 % de minimis concentration (fibrous forms)

Xylenes (1330-20-7)
CERCLA: 100 lb final RQ; 45.4 kg final RQ

State Regulations
A: General Product Information
Other state regulations may apply. Check individual state requirements.

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>Kaolin</td>
<td>1332-58-7</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Stoddard solvent (mineral spirits)</td>
<td>8052-41-3</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Silica, amorphous</td>
<td>7631-86-9</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>1344-28-1</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>14808-60-7</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Xylenes</td>
<td>1330-20-7</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
WARNING! This product contains a chemical known to the state of California to cause cancer.
Carbon black
Crystalline silica

Ethyl Benzene - not intentionally added
Benzene - not intentionally added

WARNING! This product contains the following substance(s) known to the state of California to cause reproductive harm.

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

The following components listed in this product are listed on the TSCA Export Notification 12(b) list.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>TSCA 12 (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylenes (related to p-Xylene)</td>
<td>1330-20-7</td>
<td>Yes</td>
</tr>
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</table>
B: Component Analysis - Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>TSCA</th>
<th>DSL</th>
<th>EINECS</th>
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<tbody>
<tr>
<td>Solvent naphtha (petroleum), light aliphatic</td>
<td>64742-89-8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Kaolin</td>
<td>1332-58-7</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Stoddard solvent (mineral spirits)</td>
<td>8052-41-3</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Silica, amorphous</td>
<td>7631-86-9</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>1344-28-1</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Polybutene homopolymer</td>
<td>9003-29-6</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Polyisobutylene</td>
<td>9003-27-4</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Crystalline silica</td>
<td>14808-60-7</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Xylenes</td>
<td>1330-20-7</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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>
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<tbody>
<tr>
<td>Stoddard solvent (mineral spirits)</td>
<td>8052-41-3</td>
<td>1 %</td>
</tr>
<tr>
<td>Silica, amorphous</td>
<td>7631-86-9</td>
<td>1 %</td>
</tr>
<tr>
<td>Aluminum oxide</td>
<td>1344-28-1</td>
<td>1 %</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>1 %</td>
</tr>
<tr>
<td>Xylenes</td>
<td>1330-20-7</td>
<td>0.1 % (related to p-Xylene)</td>
</tr>
</tbody>
</table>

WHMIS Classification

Controlled Product Classification: B2, D2A, 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

Prepared for:
Johns Manville
Roofing 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>
</tr>
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<tbody>
<tr>
<td>11/30/06</td>
<td>3105B-1.0000</td>
<td>New MSDS authoring system for new EPDM vendor.</td>
</tr>
<tr>
<td>09/17/09</td>
<td>3105B-1.0001</td>
<td>Updated SDS to GHS format. Updated transportation classification to include cartridges.</td>
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End of Sheet 3105B