

**Section 1 - Product and Company Identification**

Hazard Label CAUTION label

**Company Information**Johns Manville  
Roofing Systems  
P.O. Box 5108  
Denver, CO 80127 USATelephone: 303-978-2000 8:00AM-5:00PM M-F  
Internet Address: <http://www.jm.com>  
Emergency: 800-424-9300 (Chemtec, In English)

Trade Names: BUR Adhesive

Use: These products may be used to adhere membranes to other modified bitumen membranes

**Section 2 - Hazards Identification****Emergency Overview**

HMIS Ratings: Health = 1 Fire = 2 Reactivity = 0

**Inhalation**

Irritation of the upper respiratory tract, coughing, and congestion may occur in extreme exposures. Severe irritation of the mouth, nose, and throat, as well as signs of central nervous system depression (drowsiness, dizziness, headache), may occur upon inhalation of vapors or gases.

**Skin**

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

**Ingestion**

This product is not intended to be ingested under normal conditions of use. May be harmful if swallowed. May cause gastrointestinal irritation and disturbances. May cause effects similar to those for inhalation exposure. Aspiration into the lungs may cause lung inflammation and other lung injury.

**Eyes**

Irritation, redness, and burning in eyes may occur.

**Ears**

Temporary irritation (itching) or redness may occur.

**Primary Routes of Entry (Exposure)**

Inhalation, skin, and eye contact.

**Target Organs**

Skin, eye, lungs, central nervous system (CNS), respiratory system, kidney, liver.

**Medical Conditions Aggravated by Exposure**

Pre-existing eye, skin, respiratory, central nervous system (CNS), liver and kidney diseases or conditions.

**Section 3 - Composition/Information on Ingredients**

CAS #	Component	Percent
Not Available	Petroleum Asphalt	40-70
8052-41-3	Stoddard solvent (mineral spirits)	10-30
1317-65-3	Calcium carbonate	15-40
12174-11-7	Clay, hydrous	3-7
9004-34-6	Cellulose	1-5
64742-95-6	Petroleum naphtha, light aromatic	1-5
108-67-8	1,3,5-Trimethylbenzene	1-5
1330-20-7	Xylenes (o-, m-, p- isomers)	0.5-1.5
14808-60-7	Crystalline silica	0.5-1.5
95-63-6	Benzene, 1,2,4-trimethyl-	1-5

**General Product Description**

Black liquid. Strong solvent odor.

**Section 4 - First Aid Measures****First Aid: Inhalation**

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

**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:** 105°F

**Upper Flammable Limit (UFL):** 6

**Auto Ignition:** No Data

**Rate of Burning:** Not determined

**General Fire Hazards**

CAUTION: Combustible 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.

**Extinguishing Media**

Carbon dioxide (CO<sub>2</sub>), 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:** CC

**Lower Flammable Limit (LFL):** 0.9

**Flammability Classification:**

**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.

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

**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****Stoddard solvent (mineral spirits) (8052-41-3)**

OSHA: 500 ppm TWA; 2900 mg/m<sup>3</sup> TWA  
100 ppm TWA; 525 mg/m<sup>3</sup> TWA

ACGIH: 100 ppm TWA

**Calcium carbonate (1317-65-3)**

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

**Cellulose (9004-34-6)**

OSHA: 15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)  
15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)  
ACGIH: 10 mg/m3 TWA

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

OSHA: 100 ppm TWA; 435 mg/m3 TWA  
100 ppm TWA; 435 mg/m3 TWA  
ACGIH: 100 ppm TWA  
150 ppm STEL

**Crystalline silica (14808-60-7)**

OSHA: 0.1 mg/m3 TWA (respirable dust)  
((250)/(%SiO<sub>2</sub> + 5) mppcf TWA (respirable)); ((10)/(%SiO<sub>2</sub> + 2) mg/m3 TWA (respirable));  
((30)/(%SiO<sub>2</sub> + 2) mg/m3 TWA (total dust))  
ACGIH: 0.025 mg/m3 TWA (respirable fraction)

**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.

<b>Section 9 - Physical &amp; Chemical Properties</b>
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<b>Appearance:</b> Black <b>Physical State:</b> Liquid <b>Vapor Pressure:</b> 2 mm Hg (20°C/68°F) <b>Boiling Point:</b> 310-400° F (154-204° C) <b>Solubility (H<sub>2</sub>O):</b> Insoluble <b>Percent Volatile:</b> 20	<b>Odor:</b> Solvent <b>pH:</b> Not applicable <b>Vapor Density:</b> >1 <b>Melting Point:</b> Not applicable <b>Specific Gravity:</b> 1.20 <b>VOC:</b> 291 g/L calculated
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<b>Section 10 - Stability &amp; Reactivity Information</b>
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**Stability**

These products are not reactive.

**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****Acute Toxicity****A: General Product Information**

Vapors from this product may cause eye and upper respiratory irritation, dry throat and mouth, nausea, headache, dizziness, drowsiness, and coma in extreme cases. Prolonged exposures may lead to liver and kidney injury.

**B: Component Analysis - LD50/LC50****1,3,5-Trimethylbenzene (108-67-8)**

Inhalation LC50 Rat: 24 g/m<sup>3</sup>/4H; Oral LD50 Rat:5000 mg/kg

**Cellulose (9004-34-6)**

Inhalation LC50 Rat: >5800 mg/m<sup>3</sup>/4H; Oral LD50 Rat:>5 g/kg; Dermal LD50 Rabbit:>2 g/kg

**Petroleum naphtha, light aromatic (64742-95-6)**

Inhalation LC50 Rat: >5.2 mg/L/4H; Inhalation LC50 Rat:3400 ppm/4H; Oral LD50 Rat:8400 mg/kg; Dermal LD50 Rabbit:>2000 mg/kg

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

Inhalation LC50 Rat: 5000 ppm/4H; Inhalation LC50 Rat:47635 mg/L/4H; Oral LD50 Rat:4300 mg/kg; Dermal LD50 Rabbit:>1700 mg/kg

**Benzene, 1,2,4-trimethyl- (95-63-6)**

Inhalation LC50 Rat: 18 g/m<sup>3</sup>/4H; Oral LD50 Rat:3400 mg/kg; Dermal LD50 Rabbit:>3160 mg/kg

**Crystalline silica (14808-60-7)**

Oral LD50 Rat: 500 mg/kg

**Component Carcinogenicity****Clay, hydrous (12174-11-7)**

IARC: Monograph 68 [1997] (long fibres >5 µm), Supplement 7 [1987] (Group 2B (possibly carcinogenic to humans))

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71 [1999], Monograph 47 [1989] (Group 3 (not classifiable))

**Crystalline silica (14808-60-7)**

ACGIH: A2 - Suspected Human Carcinogen

NTP: Known Human Carcinogen (Select Carcinogen)

IARC: Monograph 68 [1997] (listed under Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources) (Group 1 (carcinogenic to humans))

**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.

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

##### 1,3,5-Trimethylbenzene (108-67-8)

96 Hr LC50 Pimephales promelas: 3.48 mg/L

24 Hr EC50 water flea: 50 mg/L

##### Petroleum naphtha, light aromatic (64742-95-6)

96 Hr LC50 Oncorhynchus mykiss: 9.22 mg/L

48 Hr EC50 Daphnia magna: 6.14 mg/L

##### Xylenes (o-, m-, p- isomers) (1330-20-7)

96 Hr LC50 Pimephales promelas: 13.4 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 2.661-4.093 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 13.5-17.3 mg/L; 96 Hr LC50 Lepomis macrochirus: 13.1-16.5 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 19 mg/L; 96 Hr LC50 Lepomis macrochirus: 7.711-9.591 mg/L [static]; 96 Hr LC50 Pimephales promelas: 23.53-29.97 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 780 mg/L [semi-static]; 96 Hr LC50 Cyprinus carpio: >780 mg/L; 96 Hr LC50 Poecilia reticulata: 30.26-40.75 mg/L [static]

48 Hr EC50 water flea: 3.82 mg/L; 48 Hr LC50 Gammarus lacustris: 0.6 mg/L

##### Benzene, 1,2,4-trimethyl- (95-63-6)

96 Hr LC50 Pimephales promelas: 7.19-8.28 mg/L [flow-through]

48 Hr EC50 Daphnia magna: 6.14 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

DOT: Not restricted if shipped in containers < 450L (119 gallons)

IATA & IMDG: Contact JM Product Stewardship for transport classification and label.

## 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.

**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).

**Xylenes (o-, m-, p- isomers) (1330-20-7)**

SARA 313: 1.0 % de minimis concentration  
CERCLA: 100 lb final RQ; 45.4 kg final RQ

**Benzene, 1,2,4-trimethyl- (95-63-6)**

SARA 313: 1.0 % de minimis concentration

**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:

Component	CAS #	CA	FL	MA	MN	NJ	PA
Stoddard solvent (mineral spirits)	8052-41-3	Yes	No	Yes	Yes	Yes	Yes
Calcium carbonate	1317-65-3	No	No	Yes	Yes	Yes	Yes
Clay, hydrous	12174-11-7	Yes	No	No	No	No	No
1,3,5-Trimethylbenzene	108-67-8	Yes	No	Yes	No	No	No
Cellulose	9004-34-6	No	No	Yes	Yes	Yes	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	No	Yes	Yes	Yes	Yes
Benzene, 1,2,4-trimethyl-	95-63-6	No	No	Yes	Yes	Yes	Yes
Crystalline silica	14808-60-7	No	No	Yes	Yes	Yes	Yes

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.

Component	CAS #
Crystalline silica	14808-60-7

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).

**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
Stoddard solvent (mineral spirits)	8052-41-3	Yes	Yes	Yes
Calcium carbonate	1317-65-3	Yes	No	Yes
Clay, hydrous	12174-11-7	No	No	No
1,3,5-Trimethylbenzene	108-67-8	Yes	Yes	Yes
Cellulose	9004-34-6	Yes	Yes	Yes
Petroleum naphtha, light aromatic	64742-95-6	Yes	Yes	Yes
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes
Benzene, 1,2,4-trimethyl-	95-63-6	Yes	Yes	Yes
Crystalline silica	14808-60-7	Yes	Yes	Yes

**International Regulations****A: General Product Information**

Clay, hydrous CAS 12174-11-7 is exempt from the TSCA inventory for one of the following two reasons:

1) It is a naturally occurring substance that is removed by simple extraction methods from Fuller's Earth (CAS# 8031-18-3), and such substances are exempt from listing on the TSCA inventory.

2) It is the hydrated form of Magnesium Aluminum Silicate (CAS# 1327-43-1), and hydrates are not subject listing on the TSCA inventory.

**B: Component Analysis - WHMIS IDL**

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

Component	CAS #	Minimum Concentration
Stoddard solvent (mineral spirits)	8052-41-3	1 %
1,3,5-Trimethylbenzene	108-67-8	0.1 %
Benzene, 1,2,4-trimethyl-	95-63-6	0.1 %
Crystalline silica	14808-60-7	1 %

**WHMIS Classification**

Controlled Product Classification: B3 D2A

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:  
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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.

Date	MSDS #	Reason
08/21/08	3162-1.0000	Moved product from SDS 3117
10/01/09	3162-1.0001	Updated composition in Section 3 and VOC info in Section 9.
12/04/09	3162-1.0002	Update to VOC content based on current information from supplier.

End of Sheet 3162