

Section 1 - Product and Company Identification

Hazard Label WARNING label

Company Information

Johns Manville
 Insulation Systems
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 Internet Address: <http://www.jm.com>
 Emergency: 800-424-9300 (Chemtrec, In English)

Trade Names: Micro-Lok® Pipe Insulation

General Comments:

This product is manufactured in Canada. For Micro-Lok® Pipe Insulation manufactured in the U.S., see JM SDS ID # 1009 available on www.jm.com.

Section 2 - Hazards Identification

Emergency Overview

Inhalation of excessive amounts of dust from the product may cause temporary upper respiratory irritation and/or congestion--remove individual to fresh air.

In high temperature applications, treatment, curing, or in geographic areas of high heat and humidity, this product may release gases irritating to the eyes, nose and throat. In confined or poorly ventilated areas, use air supplied respirators during the first heat-up cycles.

Inhalation

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

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

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.

Ears

Temporary irritation (itching) or redness may occur.

Primary Routes of Entry (Exposure)

Eyes, skin, inhalation (breathing dust and fibers) and ingestion.

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
65997-17-3	Fiber Glass Wool	65-96
Proprietary	Urea extended phenol-formaldehyde polymer	4-15
Not Available	Acrylic-based polymer (present in top and edge coating)	<5
50-00-0	Formaldehyde	<1
1309-64-4	Antimony trioxide (present in top and edge coating)	<1
1163-19-5	Decabromodiphenyl oxide	<1
7440-38-2	Arsenic	0.18*

Component Information

Formaldehyde may be released by partial hydrolysis of the urea formaldehyde polymer.

General Product Description

Fibers assembled into tubes, blankets or boards. The products may be faced with kraft, aluminum foil, vinyl, glass/polyester or combination thereof. Some products may have a coating.

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 and fibers. Alternatively, fibers can be removed from the skin by use of ordinary masking or wrapping tape. Should irritation persist, seek medical attention.

First Aid: Ingestion

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

First Aid: Eyes

Do not rub or scratch eyes. Dust particles may cause the eye to be scratched. Flush eyes with large amounts of water until irritation subsides. If irritation persists, seek medical attention.

First Aid: Ears

Wash exposed skin with soap and water. If irritation develops in the inner ear, 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 applicable

Auto Ignition: Not determined

Rate of Burning: Not determined

General Fire Hazards

There is no potential for spontaneous fire or explosion. Inorganic glass fibers are naturally non-combustible and non-flammable.

Extinguishing Media

Carbon dioxide (CO₂), water, water fog, dry chemical.

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 applicable

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

The Occupational Safety and Health Administration (OSHA) has not adopted specific occupational exposure standards for fiber glass. Fiber glass is treated as a nuisance dust and is regulated by OSHA as a particulate not otherwise regulated (total dust) shown in CFR 1910.1000 Table Z-3.

Respirable fraction 5 mg/m³

Total dust 15 mg/m³

JM has adopted the fiber glass industry voluntary Product Stewardship Program (PSP), formerly the NAIMA-OSHA Health and Safety Partnership Program (HSPP). Under the PSP, JM recommends that exposures be limited to the voluntary concentration of 1 f/cc TWA for fibers longer than 5 microns with a diameter less than 3 microns. This will help minimize potential irritation effects. The PSP also includes the PPE recommendations described below.

Formaldehyde (50-00-0)

OSHA: 0.75 ppm TWA
0.5 ppm Action Level; 0.75 ppm TWA; 2 ppm STEL (Irritant and potential cancer hazard - see 29 CFR 1910.1048)
3 ppm TWA (unless specified in 1910.1048)
ACGIH: 0.3 ppm Ceiling

Arsenic (7440-38-2)

OSHA: 0.5 mg/m3 TWA
ACGIH: 0.01 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: Ears

Use ear protection (earplugs, hood, or earmuffs) to prevent airborne dust or fibers from entering the ear, if necessary.

Personal Protective Equipment: Skin

Leather or cotton gloves should be worn to protect against mechanical abrasion. See also Personal Protective Equipment: General, below.

Personal Protective Equipment: Respiratory

A NIOSH-approved respirator should be used if ventilation is unavailable, or is inadequate for keeping levels below the applicable exposure limits referenced in Section 8 of this SDS.

Ventilation

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

Personal Protective Equipment: General

Wear a cap, a loose-fitting, long-sleeved shirt and long pants to protect skin from irritation. Exposed skin areas should be washed with soap and water after handling or working with fiber glass. Clothing should be washed separately from other clothes, and the washer should be rinsed thoroughly (run empty for a complete wash cycle). This will reduce the chances of fiber glass being transferred to other clothing.

Section 9 - Physical & Chemical Properties

Appearance: Yellow or black fibers assembled into tubes, blankets or boards.

Odor: Faint odor

Physical State: Solid
Vapor Pressure: Not applicable
Boiling Point: Not applicable
Solubility (H₂O): Insoluble
Percent Volatile: No data

pH: Not applicable
Vapor Density: Not applicable
Melting Point: >1399°C (>2550°F)
Specific Gravity: Variable

Section 10 - Stability & Reactivity Information
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Stability

These products are not reactive.

Hazardous Decomposition

May form carbon dioxide and carbon monoxide.

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information**Acute Toxicity****A: General Product Information**

If dust evolves from this product during use it may cause temporary mechanical irritation or scratchiness of the throat and/or itching of the eyes and skin.

Exposure to formaldehyde may cause eye and upper respiratory irritation, and possible respiratory or skin sensitization (allergy). If sensitization occurs, subsequent exposures to formaldehyde may worsen asthma or other respiratory problems, and cause allergic-type reactions.

B: Component Analysis - LD50/LC50**Urea extended phenol-formaldehyde polymer (Proprietary)**

Oral LD50 Rat: 7 g/kg

Decabromodiphenyl oxide (1163-19-5)

Inhalation LC50 Rat: >48.2 mg/L/1H; Oral LD50 Rat:>2000 mg/kg; Dermal LD50 Rabbit:>2000 mg/kg

Formaldehyde (50-00-0)

Inhalation LC50 Rat: 0.578 mg/L/4H; Oral LD50 Rat:500 mg/kg

Antimony trioxide (present in top and edge coating) (1309-64-4)

Oral LD50 Rat: >34600 mg/kg

Arsenic (7440-38-2)

Oral LD50 Rat: 763 mg/kg

Carcinogenicity**A: General Product Information**

Exposure to formaldehyde has been associated with the development of nasopharyngeal cancer in laboratory animals and humans. Formaldehyde has been classified as a known human carcinogen, Group 1, by the International Agency for Research on Cancer (IARC). The US National Toxicology Program (NTP) considers formaldehyde as known to be a human carcinogen. OSHA specifically regulates formaldehyde under 29 CFR 1910.1048.

B: Component Carcinogenicity**Fiber Glass Wool (65997-17-3)**

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans (listed under Synthetic Vitreous Fibers)

NTP: Reasonably Anticipated To Be A Human Carcinogen (respirable size) (Possible Select Carcinogen)

IARC: Group 3 - Not Classifiable (IARC Monograph 81 [2002] (listed under Man-made mineral fibres), Monograph 43 [1988])

Decabromodiphenyl oxide (1163-19-5)

IARC: Group 3 - Not Classifiable (IARC Monograph 71 [1999], Monograph 48 [1990])

Formaldehyde (50-00-0)

ACGIH: A2 - Suspected Human Carcinogen

OSHA: 0.5 ppm Action Level; 0.75 ppm TWA; 2 ppm STEL (Irritant and potential cancer hazard - see 29 CFR 1910.1048)

NTP: Known to be a human carcinogen

IARC: Group 1 - Known Human Carcinogen

Antimony trioxide (present in top and edge coating) (1309-64-4)

ACGIH: A2 - Suspected Human Carcinogen (production)

IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 47 [1989])

Arsenic (7440-38-2)

ACGIH: A1 - Confirmed Human Carcinogen

IARC: Group 1 - Known Human Carcinogen (IARC Monograph 84 [2004] (in drinking water), Supplement 7 [1987], Monograph 23 [1980])

Chronic Toxicity

The U.S. Department of Health and Human Services, National Toxicology Program (NTP 1998, 2000, 2002) classified glass wool (respirable size) as reasonably anticipated to be a human carcinogen, based on sufficient evidence of carcinogenicity in animals. This assessment was originally prepared in 1993-1994 for the 7th Report on Carcinogens (NTP 1994), but has not been updated since then in the 8th, 9th, or 10th Reports on Carcinogens (NTP 1998, 2000, 2002).

Prolonged, excessive exposures to vapors may cause nervous system, kidney and liver damage.

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Decabromodiphenyl oxide (1163-19-5)

72 Hr EC50 Skeletonema costatum: >1 mg/L

Formaldehyde (50-00-0)

96 Hr LC50 Brachydanio rerio: 41 mg/L [static]

96 Hr EC50 water flea: 20 mg/L; 48 Hr EC50 Daphnia magna: 2 mg/L

Antimony trioxide (present in top and edge coating) (1309-64-4)

96 Hr LC50 Pimephales promelas: 833.0 mg/L; 96 Hr LC50 Lepomis macrochirus: 530 mg/L; 96 Hr LC50 Brachydanio rerio: >1000 mg/L [static]

72 Hr EC50 Selenastrum capricornutum: 67 mg/L

48 Hr EC50 Daphnia magna: >1000 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

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).

Formaldehyde (50-00-0)

SARA 302: 500 lb TPQ

SARA 313: 0.1 % de minimis concentration

CERCLA: 100 lb final RQ; 45.4 kg final RQ

Antimony trioxide (present in top and edge coating) (1309-64-4)

CERCLA: 1000 lb final RQ; 454 kg final RQ

Arsenic (7440-38-2)

SARA 313: 0.1 % de minimis concentration

CERCLA: 1 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 0.454 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal release is larger than 100 micrometers)

State Regulations**A: General Product Information**

The glass fibers in this product are not known to be regulated.

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
Decabromodiphenyl oxide	1163-19-5	No	No	Yes	Yes	Yes	Yes
Formaldehyde	50-00-0	Yes	No	Yes	Yes	Yes	Yes
Antimony trioxide (present in top and edge coating)	1309-64-4	Yes	No	Yes	Yes	Yes	Yes
Arsenic	7440-38-2	Yes	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 #
Fiber Glass Wool (?related to Mineral wool fiber) (?related to Fibrous glass)	65997-17-3
Decabromodiphenyl oxide	1163-19-5
Formaldehyde	50-00-0
Antimony trioxide (present in top and edge coating)	1309-64-4

TSCA Status

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

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:

Component	CAS #	Minimum Concentration
Fiber Glass Wool	65997-17-3	1 % (related to Fibrous glass)
Formaldehyde	50-00-0	0.1 %
Arsenic	7440-38-2	0.1 %

WHMIS Classification

Controlled Product Classification: 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:
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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
11/19/08	1803-1.0000	New MSDS for Canadian product containing arsenic in glass.
09/07/2011	1803-1.01	Regulatory update.
09/08/2011	1803-1.02	Correction sect. 8 respiratory

End of Sheet 1803