

## Section 1 - Product and Company Identification

Hazard Label CAUTION label

### Company Information

Johns Manville  
Insulation 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: LinaTex™

**Use:** This product is used to insulate the interior of heating and air conditioning ducts in systems not exceeding 6000 fpm and 250°F on the air stream side.

## 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.

### Summary

Breathing dust from this product may cause a scratchy throat, congestion, and slight coughing. Getting dust or fibers on the skin, or in the eyes may cause itching, rash, or redness. Additional health and safety information is provided in Section 11 of this safety data sheet.

### 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
Not Available	Continuous Filament Glass Fiber	70-85
Not Available	Phenolic Resin	10-20
Not Available	Phenol Formaldehyde Polymer	7-10
1163-19-5	Decabromodiphenyl oxide (present in black acrylic coating)	0-1
1333-86-4	Carbon black (encapsulated)	0-10
Not Available	Black Acrylic Coating	1-5
1309-64-4	Antimony trioxide	<1

**Component Information**

Fiber average diameters are 5 to 13 microns

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

**General Product Description**

A textile fiber duct liner produced with essentially 100% opened textile fiber. The product is faced with a black non-woven glass mat facing.

**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. A saline spray in the nose may help clear any fibers.

**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**

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.

Irritating gases may be released under conditions of high heat or humidity. At high levels, these could cause severe upper respiratory and eye irritation. Formaldehyde gas is a skin and respiratory sensitizer. Treatment should be directed toward removing the source of irritation with symptomatic treatment as necessary.

**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 (CO<sub>2</sub>), 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/m<sup>3</sup>  
Total dust 15 mg/m<sup>3</sup>

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.

### Carbon black (encapsulated) (1333-86-4)

ACGIH: 3.5 mg/m<sup>3</sup> TWA  
OSHA: 3.5 mg/m<sup>3</sup> 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 respirator should be used if ventilation is unavailable, or is inadequate for keeping dust and fiber 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 or fiber concentrations exceed the applicable exposure limits. Operations such as sawing, blowing, tear out, and spraying may generate airborne fiber 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.

A NIOSH approved respirator must be used if vapor concentrations exceed exposure limits.

#### 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.

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

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:** Light brown/yellow or amber continuous filament glass with black continuous filament glass mat facer.

**Odor:** Faint resin odor.

**Physical State:** Solid

**pH:** Not applicable

**Vapor Pressure:** Not applicable

**Vapor Density:** Not applicable

**Boiling Point:** >2250 F (glass)

**Melting Point:** 2250 F (glass)

**Solubility (H<sub>2</sub>O):** Nil

**Specific Gravity:** Glass=2.6

**Softening Point:** >800 F

**Percent Volatile:** No data

**VOC:** Not determined

**Section 10 - Stability & Reactivity Information****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**

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.

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****Carbon black (encapsulated) (1333-86-4)**

Oral LD50 Rat: >15400 mg/kg; Dermal LD50 Rabbit:>3 g/kg

**Decabromodiphenyl oxide (present in black acrylic coating) (1163-19-5)**

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

**Antimony trioxide (1309-64-4)**

Oral LD50 Rat: >34600 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 Occupational Safety and Health Administration (OSHA) and the US National Toxicology Program (NTP) consider formaldehyde to have carcinogenic potential. OSHA specifically regulates formaldehyde under 29 CFR 1910.1048.

**B: Component Carcinogenicity****Continuous Filament Glass Fiber**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

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

**Carbon black (encapsulated) (1333-86-4)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 93 [in preparation], Monograph 65 [1996])

**Decabromodiphenyl oxide (present in black acrylic coating) (1163-19-5)**

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

**Antimony trioxide (1309-64-4)**

ACGIH: A2 - Suspected Human Carcinogen (production)

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

**Chronic Toxicity**

Continuous Filament Glass Fiber: No chronic health effects are known to be associated with exposure to continuous filament fiber glass. Results from epidemiologic studies have not shown any increases in respiratory disease or cancer. The International Agency for Research on Cancer (IARC) has classified continuous filament fiber glass as a Group 3 substance, not classifiable as to its carcinogenicity to humans. Because of the large diameter of continuous filament fibers, these products are not considered respirable.

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****Carbon black (encapsulated) (1333-86-4)**

24 Hr EC50 Daphnia magna: >5600 mg/L

**Decabromodiphenyl oxide (present in black acrylic coating) (1163-19-5)**

72 Hr EC50 Skeletonema costatum: >1 mg/L

**Antimony trioxide (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

7 Hr EC50 Pseudomonas putida: >3.5 mg/L

48 Hr EC50 Daphnia magna: >1000 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 Status. The following SARA 311 designations apply to this product: Immediate (acute) 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).

**Decabromodiphenyl oxide (present in black acrylic coating) (1163-19-5)**

SARA 313: 1.0 % de minimis concentration

**Antimony trioxide (1309-64-4)**

CERCLA: 1000 lb final RQ; 454 kg final RQ

**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
Carbon black (encapsulated)	1333-86-4	Yes	No	Yes	Yes	Yes	Yes
Decabromodiphenyl oxide (present in black acrylic coating)	1163-19-5	No	No	Yes	Yes	Yes	Yes
Antimony trioxide	1309-64-4	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 #
Antimony trioxide	1309-64-4
Methyl Carbamate (trace)	598-55-0

**A: 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
Continuous Filament Glass Fiber	Not Available	1 % (related to Fibrous glass)
Carbon black (encapsulated)	1333-86-4	1 %
Antimony trioxide	1309-64-4	1 %

**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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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
07/27/04	1036-1.0000	New product.
07/14/05	1036-1.0001	Regulatory updates: Sections 8, 11, & 15
03/24/08	1036-1.0101	Regulatory updates. Format changed to GHS.

End of Sheet 1036