

Section 1 - Product and Company Identification**Hazard Label** WARNING label**Company Information**Johns Manville
Insulation 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 (Chemtrec, In English)**Trade Names:**800 Series Spin Glas® Board, unfaced
1000 Series Spin Glas® Board
Duct Liner PM
Blended Blowing Wool
Fabrication Board
Hullboard (Incombustible)
Hullinsul® Fiber Glass Board
Incombustible Microlite®Insul-SHIELD® Coated Black
Linacoustic® RC
Micromat Rx™
Permacote® Linacoustic® (Types: Standard, HP and R-300)
Precipitator Spin Glas®
Spin Glas® HTB 26 & 23
R Series Microlite® (Plain)
Spin Glas® HTB 26 & 23**Use:** Lining sheet metal ducts in AC, heating and ventilation systems**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.

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 Applicable | Continuous Filament Glass Fiber | 0-12 |
| Not Applicable | Fiber Glass Wool | 65-85 |
| Not Available | Urea extended phenol-formaldehyde binder (cured) | 10-18 |
| NA | Acrylic Coating | 0-10 |
| 1333-86-4 | Carbon black, bound (present in black products only) | <1 |

| | | |
|---------|--------------|----|
| 50-00-0 | Formaldehyde | <1 |
|---------|--------------|----|

Component Information

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

General Product Description

Fibrous glass blankets or boards with glass mat facing or 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. 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

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.

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 (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

Carbon black, bound (present in black products only) (1333-86-4)

OSHA: 3.5 mg/m³ TWA

3.5 mg/m³ TWA

ACGIH: 3.5 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: Fibrous glass blankets or boards with glass mat facing or coating with glass mat facing.

Odor: Mild resin odor

Physical State: Solid

pH: Not applicable

Vapor Pressure: Not applicable

Vapor Density: Not applicable

Boiling Point: Not applicable

Melting Point: >704°C/1300°F

Solubility (H₂O): Nil

Specific Gravity: Variable

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**

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**Formaldehyde (50-00-0)**

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

Carbon black, bound (present in black products only) (1333-86-4)

Oral LD50 Rat: >15400 mg/kg; Dermal LD50 Rabbit: >3 g/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). OSHA specifically regulates formaldehyde under 29 CFR 1910.1048.

B: Component Carcinogenicity**Fiber glass wool**

NTP: Not listed.

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

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 Cause Cancer

IARC: Group 1 - Known Human Carcinogen

Carbon black, bound (present in black products only) (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])

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.

Fiber Glass Wool (non-durable glass fibers):

In October 2001, IARC classified fiber glass wool as Group 3, "not classifiable as to its carcinogenicity to humans." The 2001 decision was based on current human and animal research that shows no association between inhalation exposure to dust from fiber glass wool and the development of respiratory disease

In 2011, the National Toxicology Program (NTP, a component of the United States Department of Health and Human Services) issued its *12th Report on Carcinogens* (Report). The Report makes clear that any glass fibers that have been successfully assessed in an animal study and shown no cancer hazard are NOT among those "certain" fibers and NOT listed in the Report.

The glass fibers comprising the products on this MSDS have either been successfully assessed by appropriate animal protocols and / or have modeled Kdis values such that they are considered non-durable and the current human and animal research that shows no association between inhalation exposure to dust from fiber glass wool and the development of respiratory disease is applicable to these fibers.

Section 12 - Ecological Information**Ecotoxicity****A: General Product Information**

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity**Formaldehyde (50-00-0)**

96 Hr LC50 Pimephales promelas: 24.1 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 0.10 mg/L [flow-through]; 96 Hr LC50 Brachydanio rerio: 41 mg/L [static]

5 min EC50 Photobacterium phosphoreum: 9.0 mg/L; 15 min EC50 Photobacterium phosphoreum: 7.26 mg/L; 25 min EC50 Photobacterium phosphoreum: 6.81 mg/L; 30 min EC50 Photobacterium phosphoreum: 16.5 mg/L; 1 Hr EC50 Vibrio harveyi: 1.2 mg/L; 5 Hr EC50 Vibrio harveyi: 3.7 mg/L; 72 Hr EC50 Colpoda aspera: 5.39 mg/L
96 Hr EC50 water flea: 20 mg/L; 48 Hr EC50 Daphnia magna: 2 mg/L

Carbon black, bound (present in black products only) (1333-86-4)

24 Hr EC50 Daphnia magna: >5600 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

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.

WARNING: This product contains a substance known to the state of California to cause cancer: Methyl Carbamate (trace) 598-55-0 present in mat facer

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 |
|---|----------------|------|----|------|-----|------|------|
| Fiber Glass Wool (¹related to Glass, fibrous or dust) (²related to Fibrous glass) | Not Applicable | Yes¹ | No | Yes² | No | Yes² | Yes² |
| Fiber Glass Wool (¹related to Mineral wool fiber) (²related to Fibrous glass) | Not Applicable | Yes¹ | No | Yes¹ | Yes | Yes² | Yes¹ |
| Formaldehyde | 50-00-0 | Yes | No | Yes | Yes | Yes | Yes |
| Carbon black, bound (present in black products only) | 1333-86-4 | 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.

A: TSCA Status

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

B: Component Analysis - Inventory

| Component | CAS # | TSCA | DSL | EINECS |
|--|----------------|------|-----|--------|
| Fiber Glass Wool | Not Applicable | No | No | No |
| Fiber Glass Wool | Not Applicable | Yes | Yes | Yes |
| Formaldehyde | 50-00-0 | Yes | Yes | Yes |
| Carbon black, bound (present in black products only) | 1333-86-4 | Yes | Yes | Yes |

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 | Not Applicable | 1 % (related to Fibrous glass) |
| Formaldehyde | 50-00-0 | 0.1 % |

WHMIS Classification

Controlled Product Classification: 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:
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.

| Date | MSDS # | Reason |
|-------------|---------------|--|
| 09/30/08 | 1077-1.0000 | New SDS for new product. |
| 09/3/2011 | 1077-1.0001 | Regulatory update. |
| 01/11/2013 | 1077-1.0002 | Trade name and toxicological update in section 11. |

End of Sheet 1077