Section 1 - Product and Company Identification

Hazard Label WARNING 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: Microlite® XG™ Microlite® EQ

Use: Microlite® XG™ and Microlite® EQ is recommended as thermal insulation for the exterior of HVAC systems or other spaces or surfaces where temperature control is required.

Section 2 - Hazards Identification

Emergency Overview
Product dust may cause mechanical irritation of skin and mucous membranes.

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

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

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Available</td>
<td>Fiber Glass Wool</td>
<td>50-98</td>
</tr>
<tr>
<td>Proprietary</td>
<td>Thermoset resin</td>
<td>2-18</td>
</tr>
<tr>
<td>Not Available</td>
<td>Facings, FSK</td>
<td>0-7</td>
</tr>
<tr>
<td>1309-64-4</td>
<td>Antimony trioxide</td>
<td>&gt;0.1</td>
</tr>
</tbody>
</table>

Component Information
Antimony trioxide (fire retardant) may be present in the facings and/or adhesives. Occupational exposure to airborne antimony trioxide is not expected to occur due to product form(s) and intended use(s). Exposure limit is given for reference only.

Fiber Glass Wool average fiber diameters = approximately 4-8 microns

General Product Description
Fibrous glass blanket with 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**
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.

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**Section 5 - Fire Fighting Measures**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Upper Flammable Limit (UFL)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Lower Flammable Limit (LFL)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto Ignition</td>
<td>Not determined</td>
</tr>
<tr>
<td>Rate of Burning</td>
<td>Not determined</td>
</tr>
<tr>
<td>General Fire Hazards</td>
<td>There is no potential for spontaneous fire or explosion. Inorganic glass fibers are naturally non-combustible and non-flammable.</td>
</tr>
<tr>
<td>Extinguishing Media</td>
<td>Carbon dioxide (CO₂), water, water fog, dry chemical.</td>
</tr>
<tr>
<td>Fire Fighting Equipment/Instructions</td>
<td>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.</td>
</tr>
</tbody>
</table>

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**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.

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**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.

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**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.

**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-certified 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.

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Fibrous glass blanket.</td>
</tr>
<tr>
<td>Odor</td>
<td>No significant odor</td>
</tr>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point</td>
<td>&gt;704°C/1300°F</td>
</tr>
<tr>
<td>Solubility (H₂O)</td>
<td>Nil</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Percent Volatile</td>
<td>0</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Variable</td>
</tr>
<tr>
<td>VOC</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Section 10 - Stability & Reactivity Information

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.

B: Component Analysis - LD50/LC50
Antimony trioxide (1309-64-4)
Oral LD50 Rat: >34600 mg/kg

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])

Antimony trioxide (1309-64-4)
AGIHC: A2 - Suspected Human Carcinogen (production)
IARC: Group 2B - Possibly Carcinogenic to Humans (IARC Monograph 47 [1989])

Chronic Toxicity
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**

- **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 311/312: 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).

- **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:

<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>Antimony trioxide</td>
<td>1309-64-4</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.
Material Name: Specialty Fiber Glass Wool Insulation

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber Glass Wool</td>
<td>Not Available</td>
</tr>
<tr>
<td>Antimony trioxide</td>
<td>1309-64-4</td>
</tr>
</tbody>
</table>

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.

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:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Minimum Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber Glass Wool</td>
<td>Not Available</td>
<td>1% (related to Fibrous glass)</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Date</th>
<th>MSDS #</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/28/03</td>
<td>1201-1.0000</td>
<td>New Formaldehyde-free products; new MSDS.</td>
</tr>
<tr>
<td>07/01/03</td>
<td>1201-1.0001</td>
<td>Sect. 10: delete hydrogen cyanide; not a product of decomposition or burning.</td>
</tr>
<tr>
<td>11/04/03</td>
<td>1201-1.0002</td>
<td>Section 2, added Facing and Antimony for Microlite. Sections 8, 11, 15 updated for Antimony.</td>
</tr>
<tr>
<td>04/28/04</td>
<td>1201-1.0003</td>
<td>Section 1, edited Flex-Glas trademark. Regulatory update. Minor edits.</td>
</tr>
<tr>
<td>06/29/06</td>
<td>1201-1.0004</td>
<td>Addition of Spin-Glas WH XG to trade names; Removal of Whispertone Wallboard - obsolete product; Removal of formaldehyde free from material name.</td>
</tr>
<tr>
<td>06/02/08</td>
<td>1201-1.0005</td>
<td>Range-Glas and Spin-Glas WH moved to SDS 1202. Moved Whispertone® Tackboard XG™ to SDS 1056. SDS update to GHS format.</td>
</tr>
<tr>
<td>06/02/09</td>
<td>1201-1.0006</td>
<td>Flex Glas moved to SDS 1071.</td>
</tr>
<tr>
<td>01/07/13</td>
<td>1201-1.0007</td>
<td>Added trade name. Updated toxicological Information in Section 11.</td>
</tr>
</tbody>
</table>