1. PRODUCT IDENTIFICATION

Acousti-Glass™
AK Board™
FSK Duct Wrap™
Akousti-Liner™
Akousti-Liner R™
Alley-K Pipe Insulation™
Alley-Wrap™
Alley Wrap FSK™
AP Insulation™
Ak Flex™
TC Liner™
TC Liner R™
UMBI Unfaced Metal Building Insulation™
Flex Duct Insulation™

Chemical name: Mixture
CAS No: None Assigned
Common Name: Fiber Glass Insulation

Degree of hazard
0- Minimal (insignificant)
1- Slight
2- Moderate
3- Serious (high)
4- Severe (Extreme)

Chronic Health Effects

HMIS Rating: 1* 0 0
(See section 9 for acronyms definitions.)

2. INGREDIENT INFORMATION

Chemical Name: Fiber Glass
CAS No: 65997-17-3
Common Name: Fibrous glass wool or fiber glass facing
Percent in Product: 65-96%
Exposure Limits:
- OSHA PEL
  - Total Nuisance Dust: 15 mg/m³
  - Total Glass Dust: 5 mg/m³
  - Respirable Nuisance: 5 mg/m³
  - Respirable Fibers 3 f/cm³
- NIOSH REL
  - Total Glass Dust 5 mg/m³
  - Respirable Fibers 3 f/cm³

Chemical Name: Urea, Polymer with formaldehyde and phenol (cured)
CAS No: 25104-55-6
Common Name: Phenol formaldehyde urea polymer
Percent In Product: 4 – 15%
Exposure Limits:
- OSHA PEL
  - None
- ACGIH TLV-TWA
  - None
- OTHER
  - None
Products with FSK and ASJ Facing and Products Made With Top and Edge Coating

Chemical Name: Antimony Trioxide
CAS No: 1309-64-4
Common Name: (included in: TC Liner, TC Liner R, AK Liner, AK-Liner R, Alley Wrap B.C.B.M and in all FSK and ASJ products).
Percent in Product: < 1%
Exposure Limits:

<table>
<thead>
<tr>
<th></th>
<th>OSHA PEL</th>
<th>ACGIH TLV-TWA</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.5 mg/m³</td>
<td>0.5 mg/m³</td>
<td>0.5 mg/m³</td>
</tr>
</tbody>
</table>

Products made with Top and Edge Coating

Chemical Name: Acrylic-based polymer
CAS No: Not available
Common Name: (included in: TC Liner, TC Liner R, AK Liner, AK-Liner R and Alley Wrap B.C.B.M.).
Percent in Product: < 5%
Exposure Limits:

<table>
<thead>
<tr>
<th></th>
<th>OSHA PEL</th>
<th>ACGIH TLV-TWA</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Products made with Top and Edge Coating

Chemical Name: Decabromodiphenyl Oxide
CAS No: 1163-19-5
Common Name: (included in: TC Liner, TC Liner R, AK Liner, AK-Liner R and Alley Wrap B.C.B.M.).
Percent in Product: < 1%
Exposure Limits:

<table>
<thead>
<tr>
<th></th>
<th>OSHA PEL</th>
<th>ACGIH TLV-TWA</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

3. PHYSICAL DATA

Boiling Point: > 1399°C (> 2550°F) "Glass"
Melting Point: > 1399°C (> 2550°F) "Glass"
Odor: Faint odor
Water Solubility: Insoluble
Color: Yellow or Black

Vapor Density: N/A
Specific Gravity: Variable
Evaporative Rate: N/A
Physical State: Solid

Appearance: 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.

4. FIRE AND EXPLOSION HAZARD DATA

Flash Point and Method: N/A
Flammable Limit: N/A
Auto ignition Temperature: N/A
Extinguishing Media: Water, foam, dry chemical or carbon dioxide (CO₂).
Special Fire-Fighting Procedures: Treat as residential building materials.

In case of fire, seek fresh air, administer oxygen and get medical help
Unusual Fire and Explosion Hazard: Facing on these products may burn. Use special care with facing when working close to an open flame. These products contain a cured phenolic-based binder. The binder, kraft & metalized polyester facing in a fire situation may emit toxic fumes and smoke containing carbon dioxide, carbon monoxide, molecular fragments of hydrocarbon particulates, carbon-hydrogen-nitrogen and nitrogen-oxygen compounds. Vinyl facings may thermally decompose at about 260°C (500°F) and release hydrogen chloride. Glass/polyester facing with or without coating may thermally decompose upon sustained exposure to flame and release hydrogen bromides and antimony.

5. REACTIVITY DATA

<table>
<thead>
<tr>
<th>Stability: Material is stable</th>
<th>Incompatibility: Hydrofluoric Acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity: None</td>
<td>Reactivity with water: None</td>
</tr>
</tbody>
</table>

6. HEALTH HAZARD DATA

Primary Routes of Entry: Inhalation and/or upon skin and eye contact.
Acute: Exposure to fiberglass may cause temporary skin, eye and upper respiratory irritation.
Medical Condition Which May be Aggravated: Pre-existing conditions may be aggravated by mechanical irritants upon inhalation or skin contact.
Information for Medical Practitioners: Skin irritation responds well to mild hydrocortisone cream.

Carcinogenicity: The table below shows the classification of the ingredient as a carcinogen:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>IARC</th>
<th>OSHA</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiber glass</td>
<td>Not classifiable (group 3)</td>
<td>Not listed</td>
<td>sufficient evidence for the carcinogenicity</td>
</tr>
<tr>
<td>Antimony trioxide</td>
<td>possible human carcinogen (2B)</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

In October 2001, following a re-evaluation from a scientific working group of 19 experts from 11 countries, the International Agency for Research on Cancer (IARC) has concluded its re-evaluation of the carcinogenic risk of airborne man-made vitreous fibers. By this conclusion, the fiber glass insulation is now considered not classifiable as to carcinogenicity to humans (group 3) by the IARC.

7. SPILL, LEAK, STORAGE AND DISPOSAL INFORMATION

Spill, Accidental or Unplanned Releases: Vacuum dust deposits.
Storage: Store under cover to protect product.
Waste Disposal Information: Scrap material should be disposed of in a sanitary landfill in accordance with federal, state and local regulations. Waste is not hazardous as defined by RCRA (40 CFR 261).
8. FIRST AID AND PERSONAL PROTECTION

First aid:

**Inhalation:** Remove from exposure, blow nose to evacuate fibers. Get medical help if irritation persists.

**Skin Contact:** Cleanse with soap and cold water. Get medical help if irritation persists.

**Eye Contact:** Flush well with running water for at least 15 minutes. Get medical help if irritation persists.

**Ingestion:** Non-hazardous when ingested. May cause irritation. Get medical help if an abnormal reaction appears.

In case of fire, seek fresh air, administer oxygen and get medical help.

Personal protection:

**Respirator:** Wear NIOSH approved respirators when handling and applying fiber glass insulation products in accordance with the NIOSH-based exposure guidelines.

<table>
<thead>
<tr>
<th>Exposures</th>
<th>Respirator (or equivalent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 5 times NIOSH REL</td>
<td>Any dust respirator</td>
</tr>
<tr>
<td>Less than 10 times NIOSH REL</td>
<td>Any dust respirator N95 except single-use and quarter-mask respirators.</td>
</tr>
<tr>
<td>Less than 50 times NIOSH REL</td>
<td>Full-face piece respirator with a high-efficiency particulate filter N100.</td>
</tr>
</tbody>
</table>

**Product Package Label:**

**WARNING:** Contains fiber glass wool, a possible cause of cancer. This fiber glass wool insulation may cause skin, eye and respiratory irritation. When handling and/or applying this insulation:

- Wear long sleeves, gloves and cap.
- Wear eye protection (goggles, safety glasses or face mask).
- Use a NIOSH approved dust respirator such as a 3M model #8710 or #9900 or equivalent.

After handling and/or applying this insulation:

- Bathe with soap and cold water.
- Wash work clothes separately and rinse washer after use.

For additional product safety information, including dust respirator data and Material Safety Data Sheets (MSDS), call (450) 659-9101 and ask for Quality Assurance Supervisor.

**Initial Heat-up Precaution:**

Fibrous insulation can emit an acrid odor during the initial heat-up when applied to hot surfaces above 200 °C (392 °F). It is strongly recommended that adequate ventilation be provided and/or workers be supplied with approved full-face respirators.

**Work Practice and Engineering Controls:** Avoid spreading the fiberglass dust. Provide general and/or local exhaust ventilation to control airborne dust levels below exposure limits.
9. PERTINENT COMMENTS

Acronyms/definitions used in this MSDS:

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH:</td>
<td>American Conference of Governmental Industrial Hygienists (<a href="http://www.acgih.org">www.acgih.org</a>)</td>
</tr>
<tr>
<td>ASJ:</td>
<td>All Service Jacket</td>
</tr>
<tr>
<td>CAS No.:</td>
<td>Chemical Abstracts Service Number</td>
</tr>
<tr>
<td>f/cm³:</td>
<td>Fibers per cubic centimeter</td>
</tr>
<tr>
<td>FSK:</td>
<td>Foil Skrim Kraft</td>
</tr>
<tr>
<td>HMIS:</td>
<td>Hazardous Material Identification System</td>
</tr>
<tr>
<td>IARC:</td>
<td>International Agency for Research on Cancer (<a href="http://www.iarc.com">www.iarc.com</a>)</td>
</tr>
<tr>
<td>Mg/m³:</td>
<td>Milligrams per cubic meter</td>
</tr>
<tr>
<td>N/A:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>N95:</td>
<td>A particulate filter respirator for at least 95% filter efficiency.</td>
</tr>
<tr>
<td>N100:</td>
<td>A particulate filter respirator for at least 99.97% filter efficiency.</td>
</tr>
<tr>
<td>OSHA:</td>
<td>Occupational Safety and Health Administration (<a href="http://www.osha.gov">www.osha.gov</a>)</td>
</tr>
<tr>
<td>PEL:</td>
<td>Permissible Exposure Limit</td>
</tr>
<tr>
<td>RCRA:</td>
<td>Resource Conservation &amp; Recovery Act</td>
</tr>
<tr>
<td>REL:</td>
<td>Recommended Exposure Limit</td>
</tr>
<tr>
<td>TLV:</td>
<td>Threshold Limit Value</td>
</tr>
<tr>
<td>TWA:</td>
<td>Time weighted average</td>
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</tbody>
</table>

Total Dust: Suspended airborne particles of "nuisance" dusts including those of non-respirable size.
Total Glass Dust: Suspended airborne particles of dust composed of glass only, including those of non-respirable size.
Respirable Fibers: Suspended airborne particulates with diameters of 3.5 micrometers or less, lengths of 5 micrometers or more and 5:1 length to width aspect ratio.
Respirable Dust: The respirable fraction of suspended airborne particulates.

The Manson Insulation Quality Assurance department prepared this MSDS for Manson Insulation:

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[www.isolationmanson.com](http://www.isolationmanson.com)

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