1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

Product Name: Thermablok Thermal Acoustic Isolation Strips
Synonyms: Silica gel, trimethylsilylated; silica aerogel materials
Use of the Substance/Preparation: High performance insulation material
Manufacturer: Acoustiblok, Inc.
Address: 6900 Interbay Blvd.
         Tampa, FL 33616 USA
Telephone: 813-980-1400
Emergency Telephone Number: 813-980-1400

2. HAZARDS IDENTIFICATION

Appearance and Odor: White fabric material with no characteristic odor. Under certain conditions, product may have faint ammonia-like odor. Shrink wrap packaged to minimize dust.

Emergency Overview: Inhalation of excessive amounts of dust from the product may cause mechanical irritation to the respiratory tract. Dermal contact may cause mechanical irritation.

POTENTIAL HEALTH EFFECTS

Inhalation: Inhalation of airborne dusts may cause mechanical irritation of the upper respiratory tract.

Eye Contact: Exposure to dust from this product can produce a drying sensation and mechanical irritation of the eyes.

Skin Contact: Skin contact with dust from this product can produce a drying sensation and mechanical irritation of the skin and mucous membranes.

Ingestion: This material is not intended to be ingested (eaten). If ingested in large quantity, the material may produce mechanical irritation and blockage.

Acute Health Hazards: Dust from this product is a physical irritant, and may cause temporary irritation or scratchiness of the throat and / or itching and redness of the eyes and skin.

Chronic Health Hazards: Some studies of long term amorphous silica dust exposures indicate a potential for decreased lung function. In surveyed studies, this effect is characterized as compounded by smoking. Additionally, surveyed studies characterize the decreased lung function effect as reversible on discontinuation of exposure.

Per the fiberglass manufacturer, the fiberglass is considered textile grade and is not classified as a human carcinogenic by IARC (Group 3), ACGIH (Group A4), NTP, or OSHA.

Medical Conditions Aggravated by Exposure:

Excessive inhalation of dust may aggravate pre-existing chronic lung conditions including, but not limited to, bronchitis, emphysema, and asthma. Dermal contact may aggravate existing dermatitis.

CARCINOGENICITY

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH</th>
<th>NTP</th>
<th>IARC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous Filament Glass Fibers</td>
<td>A4</td>
<td>Not Listed</td>
<td>3</td>
</tr>
<tr>
<td>Amorphous Silica</td>
<td>NA</td>
<td>Not Listed</td>
<td>None</td>
</tr>
</tbody>
</table>

SECTION 2 NOTES: This product is composed of synthetic amorphous silica dioxide, often referred to as silica gel or amorphous precipitated silica. Amorphous silica should not to be confused with crystalline silica. Epidemiological studies indicate low potential for adverse health effects from exposure to amorphous silica.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percent</th>
<th>EINECS #</th>
<th>EU Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica gel, trimethylsilylated</td>
<td>126877-03-0</td>
<td>30-50</td>
<td>Not Assigned</td>
<td>None</td>
</tr>
<tr>
<td>Polyethylene terephthalate (PET or polyester)</td>
<td>25038-59-9</td>
<td>25-35</td>
<td>Not Assigned</td>
<td>None</td>
</tr>
<tr>
<td>Fibrous glass (textile grade)</td>
<td>NA</td>
<td>25-35</td>
<td>Not Assigned</td>
<td>None</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

**Eye Contact:** Immediately wash with large amounts of water for at least 15 minutes, occasionally lifting lids. If irritation occurs and persists, get medical treatment.

**Skin Contact:** Wash skin thoroughly with soap and plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Obtain medical attention if symptoms occur.

**Ingestion:** Material will pass through the body normally.

**Inhalation:** Remove to fresh air. Drink water to clear throat and blow nose to remove dust. Obtain medical attention if ill effects persist.

5. FIRE-FIGHTING MEASURES

5.1 FLAMMABILITY PROPERTIES

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Auto ignition Temperature</td>
<td>Not Applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not Applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability Limits: (Lower Explosive Limit)</td>
<td>Not Applicable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability Limits: (Upper Explosive Limit)</td>
<td>Not Applicable</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

5.2 EXTINGUISHING MEDIA:
Use media suitable for surrounding fire and that are appropriate to the surrounding environment; normal fog nozzle water application and/or exclusion of air is typically suitable for extinguishing this product.

5.3 PROTECTION FOR FIRE FIGHTERS

**Special Fire Fighting Procedures:** Normal fire fighting procedures should be followed to avoid inhalation of smoke and gases produced by a fire.

**Unusual Fire and Explosion Hazards:** Product is a super-insulation material. Densely packaged or stored material may retain heat within the internal layers causing re-ignition in the presence of oxygen if heat is not removed

**Hazardous Decomposition Products:** Primary combustion products are carbon monoxide and carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Minimize dust generation. Ensure adequate ventilation. Use personal protective equipment as necessary.

**Environmental Precautions:** Material is not soluble. Do not flush into surface water or sanitary sewer system.

**Methods for Cleaning Up:** Contain and collect released material for proper disposal. Dry vacuum is the preferred method of cleaning up.
7. HANDLING AND STORAGE

Handling  Thermablok will generate dust when handled or cut. Workplace exposure to all dusts should be controlled with standard industrial hygiene practices. Local exhaust ventilation should be the primary dust control method. Dust released during the handling of Thermablok should be cleaned up promptly. Dry vacuuming is the preferred method for cleaning up dust. Sweeping is not an effective method of picking up aerogel dust. Because aerogel dust is hydrophobic, water is not effective as a dust control agent.

Storage    Thermablok should be kept in their packaging until they are ready to be used. Unpack the material in the work area. This will help to minimize the area where dust exposure may occur. Trimmed material and scrap should be promptly packed in disposal bags.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Limit Values

There are no exposure limits identified for the main product component, classified as synthetic amorphous silica. Exposure limits for synthetic amorphous silica are based on silica (CAS No. 7631-86-9).

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Component Name</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-86-9</td>
<td>Silica, Amorphous</td>
<td>Germany TRGS 900 4 mg/m$^3$ (inhalable fraction)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UK WEL 6 mg/m$^3$ (total inhalable fraction)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.4 mg/m$^3$ (respirable fraction)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US OSHA PEL (TWA)$_a$ 15 mg/m$^3$ (total dust)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US ACGIH$_b$ 10 mg/m$^3$ (inhalable)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US ACGIH 3 mg/m$^3$ (respirable)</td>
</tr>
<tr>
<td>NA</td>
<td>Continuous filament glass fibers</td>
<td>US ACGIH 1.0 fibers/cc$_c$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>US OSHA 5 mg/m$^3$ (inhalable)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 mg/m$^3$ (total dust)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg/m$^3$ (respirable fraction)</td>
</tr>
</tbody>
</table>

$^a$ The US OSHA standard for amorphous silica is: (80 mg/m$^3$)/($\%$SiO$_2$). The NIOSH Sampling Method 7501 for Amorphous Silica calculates the %SiO$_2$ based on the percentage of crystalline silica in the sample. Because the percentage of crystalline silica in aerogel is 0%, the particulate limit applies.

$^b$ US ACGIH based on Particles Not Otherwise Specified (PNOS)

$^c$ Respirable fibers: length $>$5 μm; aspect ratio $\geq$3:1, as determined by the membrane filter method at 400–450X magnification (4-mm objective), using phase-contrast illumination. US NIOSL 100 μm, width $<$3 μm diameter and length:width ratios $\geq$3.

8.2 Exposure Control

Ventilation: Local exhaust in accordance with general industrial hygiene practices is recommended to control dust.

Respiratory Protection: A properly fitted, NIOSH or CE approved respirator should be worn when ventilation is unavailable or inadequate to maintain airborne concentrations below applicable occupational exposure limits. A respiratory protection program that meets applicable local regulations should be implemented whenever workplace conditions warrant use of a respirator.

Hand Protection  Silica aerogels are hydrophobic (repel water) and may cause drying and irritation of the skin, eyes, and mucous membranes. For this reason, nitrile, latex, or other impermeable gloves should be worn when handling aerogel blankets.

Eye Protection: Safety glasses, or chemical goggles as needed to provide greater protection from dust.
Skin Protection: Long-sleeved, long-legged work clothes are also advised. Disposable coveralls should be considered to minimize skin exposure and track out of aerogel dusts into adjacent areas.

Work Hygienic Practices: Keep materials packaged until just prior to use. Die cut in preference to rotary or other cutting methods. Dry vacuum with proper filtration preferred to sweeping. Wash thoroughly after using the product. Wash clothing if dusty conditions present. Wash hands before eating or drinking.

9. PHYSICAL AND CHEMICAL PROPERTIES

Odor: No characteristic odor. Under certain conditions, product may have faint ammonia-like odor.
pH: Not applicable.
Boling Point/Range: Not applicable.
Flash Point: Not applicable.
Flammability (solid, gas): Not applicable.
Explosive Properties: Not applicable.
Oxidizing Properties: Not applicable.
Vapor Pressure: Not applicable.
Solubility: Insoluble.
Viscosity: Not applicable.
Evaporation Rate: Not applicable

10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Conditions to Avoid: Prolonged exposure to temperatures above the recommended use temperatures.
Materials to Avoid: None known
Hazardous Decomposition Products are not expected.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY
Dust may cause mechanical irritation and dryness to eyes and skin.

Synthetic Amorphous Silica

Oral LD50: >5,000 mg/kg
Inhalation LC50: >2,000 mg/m³
Dermal LD50: >3,000 mg/kg
Eye Irritation: Synthetic amorphous silica and silicates are not irritating to skin and eyes under experimental conditions, but may produce dryness following prolonged and repeated exposure.
Skin Irritation: Synthetic amorphous silica and silicates are not irritating to skin and eyes under experimental conditions, but may produce dryness following prolonged and repeated exposure.

CHRONIC TOXICITY
Some studies of long term amorphous silica dust exposures indicate a potential for decreased lung function. In surveyed studies, this effect is characterized as compounded by smoking. Additionally, surveyed studies characterize the decreased lung function effect as reversible on discontinuation of exposure.
CARCINOGENICITY
The International Agency for Research on Cancer (IARC) considers synthetic amorphous silica to be not classifiable as to its carcinogenicity to humans (Group 3). According to the manufacturer, the fiberglass in this product is considered textile grade fibrous glass and it is not classified as a carcinogen by ACGIH, IARC, NTP or OSHA.

NOTE TO SECTION 11: Toxicological information is based on literature review for synthetic amorphous silica (CAS No. 7631-86-9)

12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Synthetic Amorphous Silica  
Fish: LC50 > 10,000 mg/L (Brachydanio rerio: 96 hour), Method OECD 203
Daphnia magna: EC50 > 10,000 mg/l (24 hours), Method OECD 202

Mobility  
None expected due to insoluble nature of product.

Persistence and Biodegradability  
Not applicable for inorganic material.

Bioaccumulative Potential  
None expected due to insoluble nature of product.

Other Adverse Effects  
None expected.

NOTE TO SECTION 12: Ecological information is based on literature review for synthetic amorphous silica (CAS No. 7631-86-9)

13. DISPOSAL CONSIDERATIONS

Dispose in an approved landfill in accordance with federal, state / provincial, and local regulation. Cover promptly to avoid dust generation. This product is not regulated as a hazardous waste under US RCRA regulations.

14. TRANSPORT INFORMATION

Shipping Name:  
Not regulated for transport

Hazard Class:  
None

UN Number:  
None

Packing Group:  
None

Required Label(s):  
None

Marine Pollutant:  
No

Additional Information:  
None

15. REGULATORY INFORMATION

EC REGULATORY INFORMATION
Product is not a classified as a dangerous material or preparation as defined in EC Directives 67/548/EEC or 1999/45/EC.

U.S. FEDERAL REGULATIONS
CERCLA (Comprehensive Response Compensation and Liability Act): Product is not classified as hazardous or reportable under this requirement.

SARA TITLE III (Superfund Amendments and Reauthorization Act): Product is not classified as hazardous or reportable under this requirement.

311/312 HAZARD CATEGORIES: Materials in this product are classified as hazardous or reportable under this requirement.
313 REPORTABLE INGREDIENTS: Materials in this product are classified as hazardous or reportable under this requirement.

STATE REGULATIONS: Materials in this product appear on the following state hazardous substance lists: CA, IN, KY, MA, MN, NC, NJ, OR, PA. Check individual state requirements

INTERNATIONAL REGULATIONS Amorphous silica (CAS No. 7631-86-9), are listed on the WHMIS Ingredient Disclosure List at a concentration threshold of 1%.

TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA HAZARD CLASSIFICATION</th>
<th>HMIS HAZARD CLASSIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>Health</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Flammability</td>
<td>Flammability</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Reactivity</td>
<td>Reactivity</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>Protection</td>
</tr>
<tr>
<td>NA</td>
<td>Refer to Section 8</td>
</tr>
</tbody>
</table>

ABBREVIATIONS:
NA Denotes no applicable information found or available.
CAS Number Chemical Abstract Service Number
EINECS Number European INventory of Existing Chemical Substances
ACGIH American Conference of Governmental Industrial Hygienists
US OSHA United States Occupational Safety and Health Administration
TLV Threshold Limit Value
PEL Permissible Exposure Limit
TWA Time-weighted average
IARC International Agency for Research on Cancer
EU European Union
NTP National Toxicology Program
R Risk
S Safety
LC50 Lethal Concentration 50%
LD50 Lethal Dose 50%
NFPA National Fire Protection Association
HMIS Hazardous Materials Identification System
US DOT United States Department of Transportation
TDG Transportation of Dangerous Goods Regulation


Revision Summary: The revised safety data sheet replaces all previous versions. The safety data sheet was modified to update format and clarify content.

DISCLAIMER: The information herein is presented in good faith and believed to be accurate as the effective data given. However, no warranty, expressed or implied, is given. It is the user’s responsibility to ensure that its activities comply with Federal, State or Provincial, and local laws.