



### HERRINGBONE SILICA FABRIC

#### 1 PRODUCT & COMPANY IDENTIFICATION

**Supplier Details:** Thermal Tech & Temp Inc.  
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#### 2 HAZARDS IDENTIFICATION

**OSHA HCS Status:** This product is not a hazardous chemical, as defined by OSHA at 29 CFR 1910.1200



**Precautionary Statements:** P281: Wear personal protective equipment as required.  
P302: If on skin, wash with mild soap and running water.  
P304: If inhaled, move individual to fresh air. Seek medical attention if irritation persists.  
P305: If in eyes, flush eyes at least 15 minutes; seek medical attention if irritation persists.

**Hazard Statements:** N/A

#### 3 COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredients	Weight %	OSHA-PELACGIH-TLV	Other
Silicone Dioxide, Continuous Filament	>/= 50 to >/= 70	a.	10 mg/m <sup>3</sup> 8-hr TWA
Compounded Polysiloxane Polymer	15 to 40	-----None Known-----	None Known
Nonhazardous Ingredients	Weight %	OSHA-PELACGIH-TLV	Other
Sizing/Bound Water	</= 10	-----None Established-----	

a. OSHA has not established a specific PEL for fibrous silicone dioxide (amorphous silica). It is considered to be a "particulate not otherwise regulated" (PNOR) and is covered under the OSHA nuisance dust PELs of 5 mg/m<sup>3</sup> for the respirable dust fraction and 15 mg/m<sup>3</sup> for the total dust fraction for an 8-hr TWA (Time Weighted Average). Chemically, AMI-SIL® is amorphous silica which has an OSHA limit of 20 mppcf or 80 mg/m<sup>3</sup>.

**4****FIRST AID MEASURES**

<b>Inhalation:</b>	Move individual to fresh air. Seek medical attention if irritation persists.
<b>Skin Contact:</b>	Wash with mild soap and running water. Use a washcloth to help remove fibers. To avoid further irritation do not rub or scratch irritated areas. Rubbing or scratching may force fibers into the skin. Seek medical attention if irritation persists.
<b>Eye Contact:</b>	Flush eyes with flowing water for at least 15 minutes. Seek medical attention if irritation persists.
<b>Ingestion:</b>	Not applicable.

**5****FIRE FIGHTING MEASURES**

<b>Extinguishing Media:</b>	Water, foam, carbon dioxide, or dry chemical.
<b>Special Fire Fighting Procedures:</b>	In a sustained fire, self-contained breathing apparatus should be worn.
<b>Unusual Fire and Explosion Hazards:</b>	None known.

**6****ACCIDENTAL RELEASE MEASURES**

<b>Action to Take for Spills:</b>	( Use Appropriate Safety Equipment/PPE): For solid product, not applicable. For dusts and fibers generated during fabrication, vacuum and containerize.
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**7****HANDLING AND STORAGE**

<b>Handling:</b>	See Section 8. The toxicologic data indicate that these materials should be handled with caution. The handling practices described in Section 8 of this MSDS must be strictly followed. Product which has been in service at elevated temperature (> 1800o F ) may undergo partial conversion to cristobalite, a form of crystalline silica. This reaction occurs at the lining hot face. As a consequence, this material becomes more friable (brittle); special caution must be taken to minimize generation of airborne dust. The amount of cristobalite present will depend on the temperature and length in service. IARC has recently reviewed the animal, human and other relevant experimental data on silica in order to critically evaluate and classify the cancer-causing potential. Based on its review, IARC has now classified crystalline silica/cristobalite as a Group 1 carcinogen. Crystalline silica inhaled in the form of quartz or cristobalite from industrial sources was classified as carcinogenic to humans on the basis of a relatively large number of epidemiological studies that together provided sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica under the conditions specified. Crystalline silica is also listed by the NTP as a substance reasonably anticipated to be a carcinogen. Special care should be taken when working with "used" material to minimize the generation of dust. The OSHA permissible exposure limit (PEL) for cristobalite is 0.05 mg/m <sup>3</sup> (resp.). The ACGIH threshold limit value (TLV) for cristobalite is 0.05 mg/m <sup>3</sup> (resp.). (ACGIH 1989 - 90). If exposure limits are exceeded or if irritation is experienced, NIOSH-approved respiratory protection should be worn. NIOSH-approved respirator for particulates with a TLV of less than 0.05 mg/m <sup>3</sup> is generally acceptable, except that supplied air respirators are required for high airborne dust concentrations.
<b>Storage:</b>	Store in a clean, dry area. Keep containers closed.
<b>Disposal:</b>	Dispose of in accordance with federal, state and local regulations as a solid nonhazardous waste.

<b>Ventilation:</b>	General dilution ventilation and/or local exhaust ventilation should be provided, as necessary, to maintain exposures below PELs or TLVs. Adequate ventilation must be provided at elevated temperatures. The base silica material is noncombustible; however, at temperatures above 250°F, the coating may generate some light steam and/or smoke for a brief period which may require local ventilation and/or exhaust.
<b>Respiratory Protection:</b>	A properly fitted NIOSH/MHSA-approved disposable dust respirator such as the 3M model 8210 or model 9900 (in high humidity environments) or equivalent should be used when: high dust levels are countered; the level of fibers in the air exceeds the OSHA permissible exposure limits; or if irritation occurs. Use respiratory protection in accordance with your company's respiratory protection program and OSHA regulations under 29 CFR 1910.134.
<b>Eye Protection:</b>	Safety glasses, goggles, or face shields should be worn whenever fiberglass materials are being handled.
<b>Protective Clothing:</b>	Wear loose-fitting, long-sleeved shirt that covers to the base of the neck, and long pants. Skin irritation from exposure to fiberglass is known to occur chiefly at pressure points such as around the neck, wrist and waist. Wear gloves when handling product.
<b>Work/Hygienic Practices:</b>	Handle in accordance with good industrial hygiene and safety practices: <ul style="list-style-type: none"> <li>= Avoid unnecessary exposure to dusts and fibers</li> <li>= Remove fibers from skin after exposure</li> <li>= Be careful not to rub or scratch irritated areas. Rubbing or scratching may force the fibers into the skin. The fibers should be washed off. Use of barrier creams can, in some instances, be helpful.</li> <li>= Use vacuum equipment to remove fibers and dusts from clothing. COMPRESSED AIR SHOULD NEVER BE USED. Always wash work clothes separately and wipe out the washer/sink in order to prevent loose glass fibers from getting on other clothes.</li> <li>= Keep the work area clean of any dusts and fibers generated during fabrication. Use vacuum equipment to clean up dusts and fibers. Avoid sweeping or using compressed air as these techniques resuspend dusts and fibers into the air.</li> <li>= Have access to safety showers and eye wash fountains.</li> <li>= For professional use only. Keep out of children's reach.</li> </ul>
<b>Exposure Limits (TLVS):</b>	N/A

<b>Melting Point (Softening):</b>	NM (Not Measured)
<b>Specific Gravity (Bare Glass):</b>	NM
<b>Vapor Pressure (mm Hg):</b>	N/A (Not Applicable)
<b>Evaporative Rate (Ethyl Ether = 1):</b>	N/A
<b>Appearance and Odor:</b>	Flexible coated fabric of various colors with no odor.
<b>pH:</b>	N/A
<b>Upper/Lower Flammability or Exposure Limits:</b>	N/A
<b>Freezing Point:</b>	N/A
<b>Partition Coefficient (n-octanol/ water):</b>	N/A
<b>Decomposition Temperature:</b>	N/A
<b>Boiling Point (°C):</b>	N/A
<b>Percent Volatile:</b>	N/A
<b>Vapor Density:</b>	N/A
<b>Solubility in Water:</b>	Not soluble.
<b>Relative Density:</b>	N/A
<b>Flash Point:</b>	N/A
<b>Auto Ignition Temperature:</b>	N/A
<b>Viscosity:</b>	N/A

## 10

## STABILITY AND REACTIVITY

<b>Stability:</b>	Product is stable.
<b>Incompatibility (Materials to Avoid):</b>	Basic phosphates, hydrofluoric acid, some oxides and hydroxides.
<b>Hazardous Decomposition Products:</b>	Sizings, binders or coatings may decompose in a fire. Primary decomposition products include carbon monoxide, carbon dioxide, silicon dioxide, other hydrocarbons and water.
<b>Hazardous Polymerization:</b>	Will not occur.
<b>Flast Point (°F):</b>	N/A (Not Applicable).
<b>Auto Ignition Temperature (°F):</b>	N/A
<b>Flammability Limits (%):</b>	LEL: N/A UEL: N/A

## 11

## TOXICOLOGICAL INFORMATION

<b>Primary Routes of Exposure:</b>	Inhalation and skin contact.								
<b>Health Hazards (Including Acute and Chronic Effects and Symptoms of Overexposure)</b>									
<b>Acute:</b>	<p><b>Inhalation:</b> Inhalation of dusts and fibers may result in irritation of the upper respiratory tract (mouth, nose and throat).</p> <p><b>Skin Contact:</b> Skin contact with dusts and fibers may produce itching and temporary mechanical irritation.</p> <p><b>Eye Contact:</b> Eye contact with fibers and dusts may produce temporary mechanical irritation.</p> <p><b>Ingestion:</b> Temporary mechanical irritation of the digestive tract. Observe individual. If symptoms develop, consult a physician.</p>								
<b>Chronic:</b>	See carcinogenicity section below. There are no known health effects associated with chronic exposure to this product.								
<b>Carcinogenicity</b>									
<b>Hazardous Ingredients:</b>	<b>Listed as carcinogen by:</b>								
Silicone Dioxide, Continuous Filament	<table> <thead> <tr> <th>ACGIH</th> <th>IARC</th> <th>NTP</th> <th>OSHA</th> </tr> </thead> <tbody> <tr> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table>	ACGIH	IARC	NTP	OSHA	N/A	N/A	N/A	N/A
ACGIH	IARC	NTP	OSHA						
N/A	N/A	N/A	N/A						
<b>Medical Conditions Aggravated by Exposure:</b>	Persons with a history of chronic respiratory or skin conditions that are aggravated by mechanical irritants may be at increased risk for worsening their condition from exposure during use of the product.								

## 12

## ECOLOGICAL INFORMATION

N/A

## 13

## DISPOSAL CONSIDERATIONS

See Section 8 (if applicable).

## 14

## TRANSPORT INFORMATION

N/A

N/A

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