# Material Safety Data Sheet

**OMNISIL**

**Manufacturer's Name**: Thermal Material Systems, Inc.  
**Emergency Telephone Number**: 1-775-359-6111  
**Address**: 508 E. Glendale Avenue, Sparks, NV 89431  
**Signature of Person Responsible for Preparation**: Gary R. Teague  
**Data Prepared**: March 30, 2000

## SECTION 1 -- IDENTIFICATION

<table>
<thead>
<tr>
<th>Common Name (used on label)</th>
<th>OmniSIL™ Silica Cloth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trade Name &amp; Synonyms</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Chemical Name</strong></td>
<td>Silicon Dioxide</td>
</tr>
<tr>
<td><strong>Formula</strong></td>
<td>SiO₂</td>
</tr>
<tr>
<td><strong>CAS No.</strong></td>
<td>7631-86-9</td>
</tr>
<tr>
<td><strong>Chemical Family</strong></td>
<td>Amorphous Silica</td>
</tr>
</tbody>
</table>

## SECTION 2 -- HAZARDOUS INGREDIENTS

**Principal Hazardous Component(s) (chemical & common name(s))**

| Amorphous Silica | > 99 % |

**Threshold Limit Value (units)**

ACGIH 10mg/m³

There is not an established threshold limit value (TLV) that is directly applicable to the OmniSIL woven silica fabrics.

Chemically, the OmniSIL silica cloths are composed of about 99.5% amorphous silicon dioxide with trace elements of iron, sodium and magnesium. The OmniSIL cloths are produced from continuous filament yarn with a medium filament diameter of 7.974 microns with a standard deviation of 1.349. The minimum filament size is 5.575 microns with the maximum size measured at 12.618 microns. The OmniSIL filaments are considered non-respirable. The OmniSIL cloths will partially transform to a cristobalite structure when subjected to steady state temperatures above 2,150°F. In the event that the OmniSIL cloths are subjected to continuous temperatures exceeding 2,150°F, appropriate precautions should be exercised. (See Section 8)

## SECTION 3 -- PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>Not Applicable (N/A)</td>
</tr>
<tr>
<td>Specific Gravity (H₂O=1)</td>
<td>2.1 g/cm³</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg)</td>
<td>N/A</td>
</tr>
<tr>
<td>Percent Volatile by Volume (%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density (Air=1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation Rate (Air=1)</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>N/A</td>
</tr>
<tr>
<td>Reactivity in Water</td>
<td>N/A</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>White when uncoated, Tan when coated with vermiculite. No odor.</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flammable Limits in Air % by Volume</td>
<td>N/A</td>
</tr>
<tr>
<td>Lower</td>
<td>N/A</td>
</tr>
<tr>
<td>Upper</td>
<td>N/A</td>
</tr>
<tr>
<td>Extinguisher Media</td>
<td>N/A</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>N/A</td>
</tr>
<tr>
<td>Special Fire Fighting Procedures</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Unusual Fire and Explosion Hazards: N/A
SECTION 4 — PHYSICAL HAZARDS

Stability

Stable. See “Incompatibility”

Incompatibility (Materials to Avoid)

Omnisil materials are not compatible with basic phosphates, hydrofluoric acid, some oxides and hydroxides; especially at elevated temperatures.

Hazardous Decomposition Products

Some forms of Omnisil may be treated with a vermiculite finish (see separate MSDS Z-01367).

Hazardous Polymerization

Will not occur.

SECTION 5 — HEALTH HAZARDS

Threshold Limit Value

ACGIH TLV is 10 mg/m³

Signs and Symptoms of Exposure

Some characteristics of Omnisil are similar to fiberglass which is identified as a nuisance particulate by ACGIH. Hypersensitive personnel may experience some irritation of the skin. If skin irritation persists, wash with mild soap and water and seek medical attention.

SECTION 6 — SPECIAL PROTECTION INFORMATION

Respiratory Protection

None Usually Required (NUR).

Ventilation

YES

Local Exhaust

YES

Mechanical (General)

NUR

Special N/A

N/A

OSHA

NO

OSHA Permissible Exposure Limit

10 mg/m³

ACGIH Threshold Limit Value

10 mg/m³

Other Exposure Limit Used

10 mg/m³

Emergency and First Aid Procedures

Omnisil fibers are non-respirable. A respirable fiber is defined as one longer than 5 μ and less than 3 μ.

1. Inhalation

In width and with a length:width ratio of more than 3:1. Omnisil is a continuous filament, 6 μ fiber product.

2. Eyes

None usually required. If irritation occurs, flush with running water and seek medical attention.

3. Skin

None usually required. If irritation occurs and persists, wash with soap and water and seek medical attention.

4. Ingestion

None usually required. If ingestion occurs, consult a physician.

SECTION 7 — SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to be Taken In Handling and Storage

Store and use in a manner to minimize airborne particles.

Other Precautions

NUR

Steps to be Taken In Case Material is Released or Spilled

Avoid dust-generating conditions. Collect by vacuum or wet methods.

Waste Disposal Methods

Dispose in accordance with local, state, and Federal regulations.