SAFETY DATA SHEET

Following Regulation 1910.1200

SDS Number: 208           Date of first issue: 01 May 1987           Date of last revision: 01 June 2015

1 - Identification of product

a - Product identifier used on the label

Tradenames: Kaomat, Kao-Tex 1000 Products, Kao-Tex 1500 Products,

b - Other means of identification

FIBROUS GLASS FILAMENT PRODUCT

c - Recommended use of the chemical and restrictions on use

Medium/High temperature fire, thermal and acoustical insulation

d - Name, address, and telephone number

Morgan Advanced Materials
P. O. Box 923; Dept. 300
Augusta, GA 30903-0923
Telephone: 706-796-4200

E - Emergency Phone Number

For Product Stewardship and Emergency Information:
Hotline - 1-800-722-5681
Fax - 706-560-4054

For additional MSDSs and to confirm this is the most current MSDS for the product, visit our web page www.morganthermalceramics.com or send a request to MT.NorthAmerica@morganplc.com

2 - Hazard Identification

a - Classification of the chemical in accordance with paragraph (d) of §1910.1200

Not classified. Read the entire safety data sheet.

b - Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in accordance with paragraph (f) of §1910.1200

None.

Emergency Overview

Dust and surface treatment burn-off vapor (n-butylamine) from this product may aggravate existing chronic lung conditions such as bronchitis, emphysema and asthma.

c - Describe any hazards not otherwise classified that have been identified during the classification process

Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary.

d - Mixture Rule

Not applicable.
3 - Composition / Information On Ingredients

a - Composition table

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>CAS NUMBER</th>
<th>% BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibrous Glass Filament</td>
<td>65997-17-3</td>
<td>93 - 100</td>
</tr>
<tr>
<td>Sizing</td>
<td>NONE</td>
<td>0 - 7</td>
</tr>
</tbody>
</table>

b - Common Name

(See Section 8 "Exposure Controls / Personal Protection" for exposure guidelines)

d - Impurities and Stabilizing Additives

Not applicable.

4 - First-Aid measures

a - Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion

Eyes

Flush with large amounts of water for at least 15 minutes. Do not rub eyes.

Skin

Wash affected area gently with soap and water. Skin cream or lotion after washing may be helpful.

Respiratory Tract

Remove affected person to clean fresh air. Drink water to clear throat, and blow nose to remove dust.

Gastrointestinal

Not applicable

c - Indication of immediate medical attention and special treatment needed, if necessary

5 - Fire-fighting measures

a - Suitable (and unsuitable) extinguishing media and

Use extinguishing media suitable for type of surrounding fire

c - Special Protective Equipment and Precautions for Firefighters

NFPA Codes: Flammability: 0 Health: 1 Reactivity: 0 Special: 0

b - Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

None

6 - Accidental Release Measures

a - Personal precautions, protective equipment, and emergency procedures

Avoid creating airborne dust. Provide workers with respirators, if necessary (See Section 8). Follow routine housekeeping procedures. Where possible, use a HEPA vacuum to clean up the spilled material. If sweeping is necessary, use a dust suppressant and place material in closed containers. Do not use compressed air for clean-up. Avoid clean-up procedures that could result in water pollution.

b - Methods and materials for containment and cleaning up

Pick up large pieces and dispose in a closed container. Follow precaution stated in above section for clean up.
7 - Handling and storage

a - Precautions for safe handling

Follow all SDS/label precautions.

b - Conditions for safe storage, including any incompatibilities

This product is stable under all conditions of storage. Store in original factory container in a dry area. Keep container closed when not in use. Do not reuse the container.

c - Empty containers

Product packaging may contain residue. Do not reuse.

8 - Risk Management Measures / Exposures Controls / Personal Protection

a - OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available

<table>
<thead>
<tr>
<th>MAJOR COMPONENT</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>MANUFACTURER’S REG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibrous Glass Filament</td>
<td>Not Established</td>
<td>1 f/cc, 5mg/m³</td>
<td>1 f/cc</td>
</tr>
</tbody>
</table>

OTHER OCCUPATIONAL EXPOSURE LEVELS (OEL)

Ontario Canada OEL – Continuous filament glass fibers = 5 mg/m³ (Inhalable) or 1 f/cc. Industrial hygiene standards and occupational exposure limits vary between countries and local jurisdictions. Check which exposure levels apply to your facility and comply with local regulations. If no regulatory dust or other standards apply, a qualified industrial hygienist can assist with a specific workplace evaluation including recommendations for respiratory protection.

b - Appropriate Engineering Controls

Use engineering controls, such as ventilation and dust collection devices, to reduce airborne particulate concentrations to the lowest attainable level.

c - Individual protection measures, such as personal protective equipment

PPE - Skin

Wear full body clothing, gloves, hat and eye protection.

PPE - Eye

Goggles/safety glasses with sideshields should be worn.

PPE – Respiratory

When it is not possible or feasible to reduce airborne fiber and dust levels below the PEL, OEL or REG through engineering controls, or until they are installed, employees are encouraged to use good work practices together with respiratory protection. Before providing respirators to employees (especially negative pressure type), employers should: 1) monitor for airborne dust concentrations using appropriate NIOSH analytical methods and select the respiratory protection based upon the results of that monitoring, 2) have the workers evaluated by a physician to determine the workers’ ability to wear respirators, and 3) implement respiratory protection training programs. Use NIOSH/MSHA approved respirators, in compliance with OSHA Respiratory Protection Standard 29 CFR 1910.134 and 29 CFR 1926.103, for the particular hazard or airborne concentrations to be encountered in the work environment.
9 - Physical and chemical properties

a - Appearance  
White or brown odorless fibers bound together in strands

b - Odor  
Not applicable

c - Odor Threshold  
Not applicable

d - Melting Point  
Not applicable

e - pH  
Not applicable

f - Initial Boiling Point/Range  
Not applicable

g - Flashpoint  
Not applicable

h - Evaporation Rate  
Not applicable

i - Flammability  
Not applicable

j - Upper/Lower Flammability or Explosive Limits  
Not applicable

k - VAPOR PRESSURE  
Not applicable

l - VAPOR DENSITY  
Not applicable

m - Solubility  
Not soluble in water

n - Relative Density  
2.4 - 2.7

o - Partition Coefficient: n-Octanol/water  
Not applicable

p - Auto-ignition temperature  
Not applicable

q - Decomposition Temperature  
Not applicable

r - Viscosity  
Not applicable

10 - Stability and Reactivity

a - Reactivity  
None.

b - Chemical Stability  
Stable under conditions of normal use.

c - Possibility of Hazardous Reaction  
None

d - Conditions to Avoid  
None

e - Incompatible Materials  
Hydrofluoric acid, phosphoric acid, strong alkalies

f - Hazardous decomposition products  
Primary combustion products are carbon monoxide, carbon dioxide, and water. A small amount of n-butylamine may release from the surface treatment and sizings on the fibers.

11 - Toxicological information

a - TOXICOKINETICS, METABOLISM AND DISTRIBUTION  

b - Acute Toxicity  

The International Agency for Research on Cancer (IARC) in June, 1987, categorized fiberglass continuous filament as not classifiable with respect to human carcinogenicity (Group 3). The evidence from human as well as animal studies was evaluated by IARC as insufficient to classify fiberglass continuous filament as a possible, probable, or confirmed cancer causing material.

N-butylamine can cause irritation of the eyes and respiratory tract, excitability, followed by depression, and pulmonary edema in laboratory animals. Concentration of n-butylamine vapor in air near 5 ppm become irritating to eyes, skin and respiratory passage. More severe exposures induce abnormal redness and peeling of the skin accompanied by a burning, itching sensation.

International Agency for Research on Cancer and National Toxicology Program  
IARC determined that insulation glass wool, continuous glass filament, rock (stone) wool and slag wool are not classifiable as to their carcinogenicity to humans (Group 3).
12 - Ecological information

a - Ecotoxicity (aquatic and terrestrial, where available)
These products are not reported to have any ecotoxicity effects.

b - Mobility in soil
No mobility in soil.

c - Bioaccumulative potential
No bioaccumulative potential.

d - Other adverse effects (such as hazardous to the ozone layer)
No information available for the product.

13 - Disposal Considerations

Waste Management and Disposal

Comply with federal, state and local regulations.
Method of disposal: Landfill. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate.

Additional information

14 - Transport information

a - UN number
Hazard Class: Not Regulated United Nations (UN) Number: Not Applicable
Labels: Not Applicable North America (NA) Number: Not Applicable
Placards: Not Applicable Bill of Lading: Product Name

b - UN proper shipping name
Not applicable.

c - Transport hazard class(es)
Not applicable.

d - Packing group, if applicable
Not applicable.

e - Environmental hazards (e.g., Marine pollutant (Yes/No))
No.

f - Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)
Not regulated.

g - Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises
Not applicable.

International
15 - Regulatory information

15.1 - United States Regulations

**UNITED STATES REGULATIONS**

**SARA Title III:** This product does not contain any substances reportable under Sections 302, 304, 313 (40 CFR 372). Sections 311 and 312 apply.


**TSCA:** All substances contained in this product are listed in the TSCA Chemical Inventory [Section 8(b)].

15.2 - International Regulations

**INTERNATIONAL REGULATIONS**

- **Canadian WHMIS:** Not a WHMIS controlled product.
- **Canadian EPA:** All substances in this product are listed, as required, on the Domestic Substance List (DSL).

16 - Other Information

Initial statement

Devitrification

Product Stewardship Program

**HMIS HAZARD RATING**

- HMIS Acute Health: 0
- HMIS Flammable: 0
- HMIS Reactivity: 0
- HMIS Personal Protective: To be supplied by user depending upon use
- NFPA Unusual Hazards: None

**TECHNICAL DATASHEETS**

Left Blank Intentionally (pending datasheet number)

**Revision Summary**

In May 2015 this SDS has been updated to GHS format in conformance with US OSHA HCS 2012 (29CFR 1910.1200) and Canada Hazardous Products Act and the Hazardous Products Regulations.

**MSDS prepared by**

SDS Prepared By: MORGAN THERMAL CERAMICS ENVIRONMENTAL, HEALTH & SAFETY DEPARTMENT

**Disclaimer**

The information presented herein is presented in good faith and believed to be accurate as of the effective date of this Safety Data Sheet. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgment; employers should note that information perceived to be less relevant has not been included in this SDS. Therefore, given the summary nature of this document, Morgan Thermal Ceramics does not extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.