



SAFETY DATA SHEET

Following Regulation 1910.1200

SDS Number: 220 Date of first issue: 27 September 1994 Date of last revision: 21 February 2022

1 - Identification of product

a - Product identifier used on the label

Tradenames: Kao-Tex 1800, Kao-Tex 1800 Textiles, Kao-Tex 1900 B-30 Textiles, Kao-Tex A-54 Textiles

b - Other means of identification

TEXTILES

c - Recommended use of the chemical and restrictions on use

High Temperature 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 SDSs and to confirm this is the most current SDS 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 respirable fibers 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

d - Mixture Rule

3 - Composition / Information On Ingredients

a - Composition table

| COMPONENTS | CAS NUMBER | % BY WEIGHT |
|----------------------|------------|-------------|
| Silica, Amorphous | | 96 |
| Hydrocarbon Coating* | 7631-86-9 | <0.5 |
| | NONE | |

*Only 1900 grades

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

Do not induce vomiting; drink plenty of water.

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

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

During sustained fire, irritating and/or toxic gases may be generated by combustion.

6 - Accidental Release Measures

a - Personal precautions, protective equipment, and emergency procedures

Avoid creating airborne dust. Follow routine housekeeping procedures. If sweeping is necessary, use a dust suppressant and place material in closed containers. Do not use compressed air for clean-up. Personnel should wear gloves, goggles and approved respirator.

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

Limit the use of power tools unless in conjunction with local exhaust. Use hand tools whenever possible. Frequently clean the work area with HEPA filtered vacuum or wet sweeping to minimize the accumulation of debris. Do not use compressed air for clean-up.

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

| EXPOSURE GUIDELINES | | | |
|---|--|--------------------|--------------------|
| MAJOR COMPONENT | OSHA PEL | ACGIH TLV | MANUFACTURER'S REG |
| Silica Amorphous | (80 mg/m ³ + % SiO ₂) or 20 mppcf | 2mg/m ³ | NONE |
| <i>OTHER OCCUPATIONAL EXPOSURE LEVELS (OEL)</i> 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

Generally not required during product application. Use appropriate control to the surrounding environment.

c - Individual protection measures, such as personal protective equipment

PPE - Skin

Wear full body clothing, gloves, hat and eye protection. Wash work clothes separately from other clothing. Rinse washer after use. If you take work clothing home, it is recommended you vacuum your clothes with a HEPA filtered vacuum before leaving the work area.

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 woven fabric |
| b - Odor | Not applicable |
| c - Odor Threshold | Not applicable |
| e - pH | Not applicable |
| d - Melting Point | 3000°F (1649°C) |
| f - Initial Boiling Point/Range | Approximately 2230°C (4046°F) |
| 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 | 2.0 - 2.4 |
| 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

Basic phosphates, hydrofluoric acid, some oxide and hydroxides, especially at elevated temperatures.

f - Hazardous decomposition products

Oxidation of the hydrocarbon coating produces carbon monoxide and carbon dioxide.

11 - Toxicological information

a - TOXICOKINETICS, METABOLISM AND DISTRIBUTION

Material which has been subjected to elevated temperatures (>1800°F) may undergo partial conversion to cristobalite, a form of crystalline silica, which may cause respiratory illness. The amount of cristobalite present will depend on the temperature and length of service. The OSHA PEL for cristobalite is 0.05 mg/m³ (respirable).

b - Acute Toxicity

c - Epidemiology

d - Toxicology

Silica, amorphous: Toxic effects described in animals from single inhalation exposures of amorphous silica include upper respiratory irritation, lung congestion, bronchitis, and emphysema. Repeated inhalation exposures at concentration of 50 or 150 mg/m³ produced increased lung weights and lung changes. No progressive pulmonary fibrosis was seen and the observed lung changes were reversible. No adverse effects were observed in this study at 10 mg/m³. No animal test reports are available to define the carcinogenic, mutagenic, or reproductive effects.

To obtain more epidemiology or toxicology information, please call the toll free telephone number for the Thermal Ceramics Product Stewardship Program found in Section 16 - Other Information.

International Agency for Research on Cancer and National Toxicology Program

Amorphous silica is not classified as to its carcinogenicity to humans (group 3).

12 - Ecological information

These products are not reported to have any ecotoxicity effects.

c - Bioaccumulative potential

No bioaccumulative potential.

d - Mobility in soil

No mobility in soil.

e - Other adverse effects (such as hazardous to the ozone layer)

No adverse effects of this material on the environment are anticipated.

13 - Disposal Considerations

Waste Management and Disposal

To prevent waste materials becoming airborne, a covered container or plastic bagging is recommended. 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

This product, as manufactured, is not classified as a listed or characteristic hazardous waste according to U. S. Federal regulations (40 CFR 261). Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under U. S. Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a "hazardous" waste. Check local, regional, state or provincial regulations to identify all applicable disposal requirements.

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

INTERNATIONAL

Canadian TDG Hazard Class & PIN: Not regulated

Not classified as dangerous goods under ADR (road), RID (train), IATA (air) or IMDG (ship).

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.

OSHA: Comply with Hazard Communication Standards 29 CFR 1910.1200 and 29 CFR 1926.59 and Respiratory Protection Standards 29 CFR 1910.134 and 29 CFR 1926.103. Components of this product are considered to be hazardous as defined by the OSHA Hazard Communication Standard.

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 regulated

Canadian EPA: All substances in this product are listed, as required, on the Domestic Substance List (DSL).

16 - Other Information

initial statement

Precautionary Measures to be Taken After Service and Upon Removal:

This material will partially transform to a form of crystalline silica (cristobalite) when subjected to steady state temperatures exceeding 2000°F. Removal of this product after service may generate respirable dust. Prolonged/repeated inhalation of respirable free crystalline silica dust may cause delayed lung injury (silicosis). IARC's classification for crystalline silica states... "Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)" [IARC Monograph Vol. 68, June 1997]. The OSHA PEL for respirable cristobalite is 0.05 mg/m3. Appropriate ventilation and respiratory protection should be provided in compliance with OSHA standards. (See Section 8)

Devitrification

Product Stewardship Program

Morgan Thermal Ceramics www.morganthermalceramics.com

HMIS HAZARD RATING

HMIS Acute Health: 0*

HMIS Flammable: 0

HMIS Reactivity: 0

HMIS Personal Protective: To be supplied by user depending upon use

*See Section 3 of the MSDS for possible chronic health effects.

TECHNICAL DATA SHEETS

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Revision Summary

Revision date updated.

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.