

## Refractory Ceramic Fiber Blanket



Datasheet Code US: 514-205

SDS Code US: 201

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### Features

- Low Thermal Conductivity
- Excellent Thermal Shock Resistance
- Low Heat Storage Capacity
- No Organic Binders

### Product Description

**Kaowool<sup>®</sup> Blanket** is produced from kaolin clay by the blowing process and offers excellent handlability, high temperature stability and unparalleled dimensional tolerances

**Cerablanket<sup>®</sup>** is produced from exceptionally pure oxides of alumina and silica using the spinning process. Cerablanket fibers have been optimized for high handling strength and offers excellent handle ability and high temperature stability.

**Cerachem<sup>®</sup> Blanket** a 2600°F (1427°C) maximum temperature rated blanket formed from a unique, patented, spun alumina- silica-zirconia fiber. It is specially designed for applications where high fiber tensile strength, low thermal conductivity and low shrinkage are required.

**Cerachrome<sup>®</sup> Blanket** is made from spun alumina-silica-chromia fiber. Cerachrome Blanket with its chromia-stabilized chemistry offers improved long term shrinkage characteristics.

### Applications

- Furnace Linings
- Kiln Linings
- Boiler Insulation
- Furnace Door Seals
- Duct Lining
- Pipe Wrap Insulation
- Investment Casting Mould Wrap
- Heat Shields
- Field Stress Relieving
- Removable Thermal Insulation Pads
- Steam and Gas Turbine Insulation

## Refractory Ceramic Fiber Blanket



| Physical Properties          | Kaowool <sup>®</sup> | Cerablanket <sup>®</sup> | Cerachem <sup>®</sup> | Cerachrome <sup>®</sup> |
|------------------------------|----------------------|--------------------------|-----------------------|-------------------------|
| Color                        | off white            | white                    | white                 | blue/green              |
| Continuous Use Temp, °F (°C) | 2000 (1093)          | 2150 (1177)              | 2400 (1315)           | 2500 (1371)             |
| Classification Temp, °F (°C) | 2300 (1260)          | 2400 (1315)              | 2600 (1426)           | 2600 (1426)             |

| Chemical Analysis, %, Weight Basis After Firing |       |       |       |       |
|---|-------|-------|-------|-------|
| Alumina, Al <sub>2</sub> O <sub>3</sub>         | 45    | 46    | 35    | 43    |
| Silica, SiO <sub>2</sub>                        | 50-55 | 54    | 50    | 54    |
| Zirconia, ZrO <sub>2</sub>                      | -     | -     | 15    | -     |
| Ferric oxide, Fe <sub>2</sub> O <sub>3</sub>    | 1.0   | -     | -     | -     |
| Titanium oxide, TiO <sub>2</sub>                | 2.2   | -     | -     | -     |
| Alkalis (NaO <sub>2</sub> +K <sub>2</sub> O)    | 0.2   | -     | -     | -     |
| Other   | trace | trace | trace | 3     |
| Leachable chlorides                             | 1-2   | trace | trace | trace |

| Thermal Conductivity, BTU-in./hr-ft <sup>2</sup> ·°F (W/m·K), per ASTM C201 |             |  |             |  |
|---|-------------|--|-------------|--|
| 8 lb/ft <sup>3</sup> Nominal Density  |             |  |             |  |
| @ 500°F (260°C)   | 0.44 (0.06) |  | 0.44 (0.06) |  |
| @ 1000°F (538°C)  | 0.87 (0.12) |  | 0.93 (0.13) |  |
| @ 1500°F (816°C)  | 1.45 (0.21) |  | 1.60 (0.23) |  |
| @ 2000°F (1093°C)   | 2.09 (0.30) |  | 2.34 (0.34) |  |

### Availability and Packaging

Kaowool and Cerablanket Blankets are packaged in cartons and stretch-wrapped onto pallets. Some size and density combinations may require a minimum order. Please check with your Thermal Ceramics office for current lead times and availability.

| Thickness,<br>inch (mm) | Density,<br>lb/ft <sup>3</sup> (kg/m <sup>3</sup> ) |        |         |          | Length,<br>inch (mm) | Width,<br>inch (mm)   | ft <sup>2</sup> (m <sup>2</sup> )/carton<br>for 24 inch<br>(610mm)<br>width rolls |
|-------------------------|---|--------|---------|----------|----------------------|-----------------------|---|
|                         | 4 (64)  | 6 (96) | 8 (128) | 10 (160) |                      |                       |   |
| ¼ (6)                   |   | ○▲     | ○▲      |          | 240 (6095)           | 24, 48<br>(610, 1220) | 160 (14.9)  |
| ½ (13)                  | ○▲  | ○▲     | ○▲      | ▲        | 600 (15240)          |                       | 100 (9.3)   |
| 1 (25)                  | ○▲  | ▲□◇    | ▲□◇     | ▲        | 300 (7620)           |                       | 50 (4.6)  |
| 1 ½ (38)                | ▲   | ▲□     | ▲□      |          | 180 (4575)           |                       | 30 (2.8)  |
| 2 (50)                  | ▲   | ▲□     | ▲□      |          | 150 (3810)           |                       | 25 (2.3)  |

○ = Kaowool, ▲ = Cerablanket, □ = Cerachem, ◇ = Cerachrome

The values given herein are typical average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your local Thermal Ceramics office to obtain current information.