Kaowool® Papers

Datasheet Code US: 5-14-801 MSDS Code US: 205, 202, 204

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Product Description

High-performance paper and felt products from Thermal Ceramics are the preferred choice over traditional fiberglass, textile, or metal products for thermal, acoustical, or filtration management.

Kaowool Flex-Wrap is produced from a blend of Kaowool high purity ceramic fibers and organic binders. Due to its low organic binder content, off-gassing is at a minimum. This specialty paper is noted for its excellent flexibility, outstanding handling characteristics, and high insulating value at high temperatures.

Features

- Low thermal conductivity and heat storage
- Excellent flexibility for wrapping applications
- Easily die cut to form complex shapes
- Thin, flexible high temperature insulation
- Excellent tensile strength
- Excellent high temperature backup and expansion joint material

Applications

- High temperature gaskets and seals
- Refractory back-up insulation
- Appliance insulation
- Separating media for heat treating metals
- High temperature filtration
- High temperature expansion joint packing
- Glassware separating media
- Parting agent for brazing operations
- Hot face and backup lining for lab furnaces
- Aluminum distributor pan lining
- Super alloy ingot mold lining and hot tapes

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Physical Properties

	Kaowool Flex-Wrap
Color	white
Density, pcf (kg/m³)	11 - 13 (176-208)
Fiber index, %	50
Continuous use limit,°F (°C)	2150 (1176)
Maximum temp rating,°F (°C)	2300 (1260)
Melting point,°F (°C)	3200 (1760)
Tensile strength, psi (MPa)	<25 (0.17)
Fired tensile strength	2 - 3

Chemical Analysis, %, Weight basis after firing

Alumina, Al_2O_3	47
Silica, SiO_2	53
Zirconia, ZiO_2	–
Other	trace
Loss Of Ignition	3 - 7

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Thermal Conductivity, BTU•in/hr•ft² (W/m•K), ASTM C 201

Mean temperature	
@ 500°F (260°C)	0.39 (0.06)
@ 1000°F (538°C)	0.69 (0.10)
@ 1500°F (816°C)	0.96 (0.14)
@ 2000°F (1093°C)	-
@ 2200°F (1204°C)	–
@ 2400°F (1316°C)	–
@ 2500°F (1371°C)	–
@ 2600°F (1427°C)	–
@ 2800°F (1538°C)	–

Chemical Properties

A small amount of organic combustible binder will burn out at approximately 300°F (149°C). Caution should be exercised during the initial heating. Adequate ventilation should be provided to avoid potential flash ignition of the binder out-gassing or avoid air entry while at elevated temperature.

Standard Sizes

Thickness, in. (cm)	1/16 to 1/4 (0.15 to 0.63)
(0.08 to 0.63)	
Width, in.(mm)	24, 48 (60,120)

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 Morgan Thermal Ceramics office to obtain current information.