



## CERAMIC FIBER BLANKET SKU: MNKXR



### Ceramic Fiber Blanket

Oswald Supply offers 3 standard grades of ceramic fiber blankets, all of which are lightweight and thermally efficient, resulting in a material that possesses the advantages of low heat storage and complete resistance to thermal shock. Used in a variety of heat processing applications, these blankets are produced from high strength spun ceramic fiber and needled to provide exceptional handling strength. These blankets are completely inorganic and are available in a variety of densities, thicknesses, widths, and temperature ratings:

Commercial Grade: service temperature 1800°F

High-Purity Grade: service temperature 2300 °F

Zirconia Grade: service temperature 2600 °F

#### Available Sizes and Packagings

- Standard Densities: 6, 8 lbs./cu.ft. (96, 128 kg/m<sup>3</sup>)
- Standard Thicknesses: 1/4", 1/2", 1", 1-1/2", 2"
- Standard Widths: 24" and 48"
- Standard Packaging: Cartons or bags

Note: Other densities available per special request

#### Typical Application

- Furnace repair
- Furnace, kiln, reformer and boiler linings
- Furnace door linings and seals
- Reusable insulation for steam and gas turbines
- High-temperature kiln and furnace insulation
- Primary reformer heater insulation
- High temperature gasketing
- Expansion joint seals
- Glass furnace crown insulation
- Field steam generator lining
- Nuclear insulation applications
- Thermal reactor insulation
- Flexible high temperature pipe insulation
- Investment casting mold wrapping
- Removable insulating blankets for stress relieving welds
- Pressure and cryogenic vessel fire protection
- Soaking pit seals
- Annealing cover seals
- High temperature filtration
- Incineration equipment and stack linings

#### Product Characteristics

- Excellent handling strength
- Excellent corrosion resistance
- Light weight
- Low thermal conductivity
- Low heat storage
- Heat reflectance
- Excellent thermal stability
- Excellent fire protection
- Resiliency
- Excellent hot strength
- Excellent sound absorption



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### Typical Physical Properties

	Commercial Grade	High-Purity Grade	Zirconium Grade
Color	White	White	White
Max. Temp. Use limit	1260 °C	1260 °C	1426 °C
	(2300 °F)	(2300 °F)	(2600 °F)
Continuous Use Temp. Limit	800 °C	1100 °C	1350 °C
	(1472 °F)	(2012 °F)	(2461 °F)
Average Fiber Diameter	3 - 4.5 microns	3 - 4.5 microns	3 - 4.5 microns
Average Tensile Strength			
4 pcf. Density	5.075 psi	5.075 psi	5.075 psi
6 pcf. Density	7.250 psi	7.250 psi	7.250 psi
8 pcf. Density	11.600 psi	11.600 psi	11.600 psi
Rate of Linear Shrinkage			
24 hrs@ 1000 °c {1832 °F}	4%	-	-
24 hrs@ 1100 °c {2012 °F}	-	3%	-
24 hrs@ 1350 °c (2462 °F)	-	-	3%
Thermal Conductivity w/m-k (Btu in./hr./ft <sup>2</sup> °F)			
4 pcf. Density@400°C (752 °F)	0.06(.416)	0.06(.416)	-
4 pcf. Density@ 600 °c (1112 °F)	-	-	-
4 pcf. Density@ 800 °c (1472 °F)	0.11(.763)	0.11(.763)	0.11(.763)
4 pcf. Density@ 1000 °C (1832 °F)	-	0.16(1.11)	0.16(1.11)
6 pcf. Density@ 400 °c (752 °F)	0.076(.527)	0.076(.527)	-
6 pcf. Density@ 600 °c (1112 °F)	-	-	-
6 pcf. Density@ 800 °c (1472 °F)	0.14(.971)	0.14(.971)	0.14(.971)
6 pcf. Density@ 1000 °c {1832 °F}	-	0.20(1.39)	0.20(1.39)
8 pcf. Density @ 400 °c (752 °F)	0.09(.624)	0.09(.624)	-
8 pcf. Density@600 °C (1112 °F)	-	0	-
8 pcf. Density@800 °c (1472 °F)	0.176(1.22)	0.176(1.22)	0.176(1.22)
8 pcf. Density@ 1000 °c (1832 °F)	1	0.22(1.53)	0.22(1.53)

### Typical Chemical Composition

	Commercial Grade	High-Purity Grade	Zirconium Grade
Al <sub>2</sub> O <sub>3</sub>	44%	47-49%	39-40%
SiO <sub>2</sub>	52%	50-52%	38-45%
ZrO <sub>2</sub>	-	-	15-17%
Fe <sub>2</sub> O <sub>3</sub>	<1.2%	0.2%	0.2%
Na <sub>2</sub> O <sub>3</sub> + K <sub>2</sub> O	<0.5%	0.2%	0.2%

Refer to the Material Safety Data Sheet (MSDS) for recommended work handling and product safety information.

Data are average results of tests conducted under standard procedures and are subject to variation. Results should not be used for specification purposes. The Information, recommendations, and opinions set forth are offered solely for consideration, inquiry, and verification, and are not, in part or total, to be construed as constituting a warranty or representation for which we assume legal responsibility. Nothing contained herein is to be interpreted as authorization to practice patented invention without a license.