

Cerablanket[®] and Cerachem[®] Blankets

Product Data Sheet



Product Description

Cerablanket and Cerachem Blankets feature exceptional thermal and physical properties. Cerablanket and Cerachem are optimised for improved handleability with excellent tensile strength, low thermal conductivity and high-temperature performance stability.

Cerablanket is made from high purity oxides of alumina and silica and has a classification temperature of 1260°C (2300°F).

Cerachem Blankets are made from alumina-silica-zirconia designed to resist excessive shrinkage at elevated temperatures and are rated to 1430°C (2600°F). Available in a wide range of densities and thicknesses allow for the most effective deployment of the superior thermal characteristics in a wide variety of applications.

Cerablanket and Cerachem Blankets are resistant to most types of chemical attack. They are lightweight, strong and feature a low heat storage capacity for effective energy savings and excellent thermal shock resistance for use in difficult environments.

Features

Excellent insulating performance

Excellent thermal stability: fibres have good resistance to devitrification

Low heat storage

Tough, resilient and strong blankets, which resist tearing both before and after heating

Resistance to thermal shock

Good acoustic properties

No smoke emission due to binder burn out

Applications

Power generation, especially HRSG duct insulation

Industrial and Commercial Chimney insulation

Furnace, Boiler and Heater linings

Pipe wrap

Back-up linings in kilns and furnaces

Consumer goods

Storage heater insulation

Metals applications like launder covers

Welding stress relief





Norte 94, #4534 Nueva Tenochtitlan 07890 Gustavo A. Madero, CDMX

info@solucionesenaislamiento.com

(55) 9129-8722 **(**55) 7990-6920

www.solucionesenaislamiento.com

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Properties	<u>Cerablanket</u>	Cerachem Blanket				
Colour	White	White				
Classification Temperature, °C (°F)	1260 (2300)	1430 (2600)				
Continuous Use Temperature, °C (°F)	1180 (2150)	1315 (2400)				
Melting Temperature, °C (°F)	1760 (3200)	1760 (3200)				
Density, kg/m³ (pcf)	64, 96, 128, 160 (4, 6, 8, 10)	64, 96, 128, 160 (4, 6, 8, 10)				
Tensile Strength, average, kPa (psi), EN 1094-1						
Measured Blanket density, kg/m³ (pcf), 64 (4)	30 (4.35)	30 (4.35)				
96 (6)	70 (10.15)	70 (10.15)				
128 (8)	90 (13.05)	90 (13.05)				
160 (10)	110 (15.95)	110 (15.95)				
Chemical Analysis, %						
Silica, SiO ₂	52 - 58	48 - 52				
Alumina, Al ₂ O ₃	42 - 48	33 - 37				
Zirconia, ZrO ₂	-	- 13 - 17				
Other	trace	trace				

Thermal Conductivity, W/m•K, per ASTM C201							
	Cerablanket			Cerachem Blanket			
Density, kg/m ³ (pcf)	<u>64 (4)</u>	<u>96 (6)</u>	<u>128 (8)</u>	<u>96 (6)</u>	<u>128 (8)</u>		
200°C	0.06	0.06	0.05	0.07	0.05		
400°C	0.11	0.09	0.08	0.1	0.08		
600°C	0.19	0.16	0.13	0.16	0.14		
800°C	0.31	0.25	0.19	0.24	0.19		
1000°C	0.45	0.36	0.27	0.36	0.27		
1200°C	-	-	-	0.51	0.36		
Thermal Conductivity, BTU•in/hr•ft²•°F, per ASTM C201							
500°F	0.5	0.46	0.4	0.53	0.4		
1000°F	1.14	0.94	0.78	0.94	0.81		
1500°F	2.2	1.77	1.36	1.75	1.39		
1832°F	3.12	2.50	1.87	2.50	1.87		
2000°F	3.68	2.94	2.15	2.96	2.15		

Product Availability

Cerablanket and Cerachem Blankets are manufactured and available globally, but packaging, density and thickness vary by region. Please contact your regional Morgan Advanced Materials - Thermal Ceramics representative to support providing specific packaging availability for your local business needs.

Whilst the values and application information in this datasheet are typical, they are given for guidance only. The values and the information given are subject to normal manufacturing variation and may be subject to change without notice. Morgan Advanced Materials – Thermal Ceramics makes no guarantees and gives no warranties about the suitability of a product and you should seek advice to confirm the product's suitability for use with Morgan Advanced Materials - Thermal Ceramics.





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