

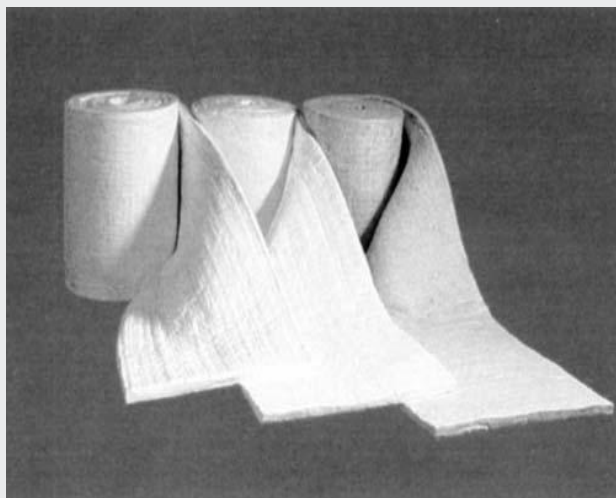
Cerablanket™, Cerachem™, Cerachrome™ Blanket



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DESCRIPTION

All three grades of blanket have the same excellent chemical stability compared with their raw materials: Cerafiber, Cerachem Fiber and Cerachrome Fiber spun bulk.

They have excellent strength before and after heating. They have superior acoustic as well as thermal insulation characteristics.

The wide range of available densities and thicknesses allow for the most effective deployment of the superior thermal characteristics in a wide variety of applications.

TYPE

Refractory fibre blankets.

Classification Temperature

Cerablanket : 1260°C

Cerachem Blanket : 1425°C

Cerachrome Blanket : 1425°C

The maximum continuous use temperature depends on the application. In case of doubt, refer to your local Morgan Thermal Ceramics for advice.

FEATURES

- Excellent insulating performance.
- Unaffected by most chemicals except hydrofluoric and phosphoric acids and strong alkalis.
- Excellent thermal stability: fibers have good resistance to devitrification.
- For some applications, it is possible to use Cerachrome Blanket above its classification temperature (shrinkage is 5% at 1500°C).
- Low heat storage.
- The combination of long spun fibres and the needling operation produce tough, resilient and strong blankets, which resist tearing both before and after heating.
- Resistance to thermal shock.
- Good sound absorption.

APPLICATIONS

- Furnace and kiln linings
- Boiler insulations
- Heat treatment temperature control
- Glass furnace crown insulation
- Furnace door seals
- Duct linings
- Pipe insulations
- Thermal barriers for automotive industry
- Insulation for field stress relieving of welds
- High temperature filter media
- Nuclear insulation applications
- Steam and gas turbines insulation

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Main properties

		Cerablanket	Cerachem Blanket	Cerachrome Blanket	
Classification temperature	°C	1260	1425	1425	
Properties Measured at Ambient Conditions (23°C/50% RH)					
Colour		white	white	blue/green	
Density (EN 1094-1)	kg/m ³	64 up to 160 (4 densities available)			
Tensile strength (EN 1094-1)					
64kg/m ³	kPa	30	30	30	
96kg/m ³	kPa	70	70	65	
128kg/m ³	kPa	90	90	85	
160kg/m ³	kPa	110	110		
High Temperature Performance					
Permanent linear change (ASTM C-210) after 24 hours isothermal heating at:					
1000°C	%	1.5	-	1.5	
1100°C	%	2.2	-	2.2	
1200°C	%	3.0	1.0	2.7	
1300°C	%	5.5	2.0	3.5	
1400°C	%	-	3.5	4.0	
1500°C	%	-	-	5.0	
Thermal Conductivity at mean temperature of (all 3 grades):		64kg/m³	96kg/m³	128kg/m³	160kg/m³
200°C	W/m.K	0.07	0.06	0.06	-
400°C	W/m.K	0.12	0.11	0.10	0.09
600°C	W/m.K	0.20	0.16	0.15	0.13
800°C	W/m.K	0.30	0.23	0.20	0.18
1000°C	W/m.K	0.43	0.32	0.27	0.25
Specific heat at 1090°C	kJ/kg.K	1.13			
Chemical Composition					
Al ₂ O ₃	%	44	35	42.7	
SiO ₂	%	56	50.0	54.5	
Cr ₂ O ₃	%	-	-	2.8	
ZrO ₂	%	-	15	-	
Fe ₂ O ₃ + TiO ₂	%	0.15	0.15	0.15	
CaO + MgO	%	0.05	0.09	0.10	

The values given herein are typical 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 Thermal Ceramics office to obtain current information.

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Na ₂ O + K ₂ O	%	0.10	0.10	0.10
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Availability and Packaging

Blankets are packed in cartons, on pallets wrapped in stretchable film.

Thick mm	Cerablanket				Cerachem Blanket				Cerachrome Blanket		Length mm	Width mm	m ² /carton
	64	96	128	160	64	96	128	160	96	128			
6			○	○			○	○			5500 x 4	610	13.42
10	○	X	X	X	○	X	X	X			18500	610	11.28
13	X	X	X	X	X	X	X	X	X	X	14640	610	8.93
19	○	X	X	X	X	X	X	X	○	○	9760	610	5.95
25	X	X	X	X	X	X	X	X	X	X	7320	610	4.46
38	X	X	X	X	X	X	X	X			4880	610	2.98
50	X	X	X	X	X	X	X	X			3660	610	2.23

Marks (○) and width 1220mm upon request (subject to minimum order requirements).

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