



Kaowool™ S and Kaowool™ SZr Blankets

Product Data Sheet

Product Description

Kaowool S and Kaowool SZr Blankets are made from bulk fibres produced by the most modern spinning process. This produces fibres of exceptional length and uniform distribution which are ideal for manufacturing blanket of controlled density, high tensile strength and resiliency.

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

Kaowool SZr 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.

Kaowool S and Kaowool SZr 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

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Properties	Kaowool S		Kaowool SZr	
Region of Manufacture	Asia			
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/m ³ (pcf)	96, 128, 160 (6, 8, 10)		96, 128, 160 (6, 8, 10)	
Tensile Strength, average, kPa (psi), EN 1094-1				
Measured Blanket density, kg/m ³ (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, %				
Alumina, Al ₂ O ₃	44		34.9	
Silica, SiO ₂	56		50.0	
Zirconia, ZrO ₂	-		15.2	
Others	0.3		trace	
High Temperature Performance				
Permanent linear shrinkage (%) (EN1094-6) after 24 hours isothermal heating at:				
1000°C	1.5		-	
1100°C	2.2		-	
1200°C	3.0		1.0	
1300°C	5.5		2.0	
1400°C	-		3.0	
Thermal Conductivity, W/m·K,				
<u>Density, kg/m³ (pcf)</u>	<u>96 (6)</u>		<u>128 (8)</u>	
200°C	0.06		0.07	
400°C	0.09		0.1	
600°C	0.16		0.16	
800°C	0.25		0.24	
1000°C	0.36		0.36	
1200°C	-		0.51	
Thermal Conductivity, BTU·in/hr·ft²·°F, per ASTM C201				
500°F	0.46		0.4	
1000°F	0.94		0.94	
1500°F	1.77		1.75	
1832°F	2.50		2.50	
2000°F	2.94		2.96	

Product Availability

Kaowool Blanket S and Kaowool SZr 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.

The product(s) represented are intended for industrial refractory applications. The values and application information in this datasheet 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.