

Technical DATA SHEET

SUPERWOOL PLUS High Temperature Blanket



Product Description

Superwool® Plus™ blanket is manufactured from pure raw materials using a new manufacturing technology. In addition to enhanced thermal properties, large nuisance dust particles have been effectively eliminated making the product soft to the touch and less irritating during use.

Superwool Plus Blanket is made of long Superwool fibres having the same chemical formulation as the original and well proven Superwool 607® fibre product. It exhibits outstanding insulating properties at elevated temperatures and is available in a wide range of thicknesses and densities.

Superwool Plus blanket has excellent thermal stability and retains its original soft fibrous structure up to its maximum continuous use temperature. Superwool Plus blanket is needed from both sides and possesses high strength before and after heating. Superwool Plus blankets do not have binders or lubricants and will not emit any fumes or smell during the first firing. Superwool Plus blanket is flexible, easy to cut and shape and easy to install. (CAS number: 329211-92-9).

Classification Temperature

Superwool Plus 1200°C (EN 1094-1)

With Superwool Plus fibre, the consistent use of pure raw materials in all our factories globally has led to the 4% shrinkage temperature rising from >1100°C to >1200°C. For this reason, the classification temperature is now given as 1200°C in line with the EN 1094-1 norm.

Superwool Plus fibres have been proven over many years to withstand continuous use in an oxidising atmosphere at 1000°C. This temperature is quoted as the Maximum Continuous Use temperature.

For applications above 1000°C, Thermal Ceramics recommends Superwool® HT™ fibre which has a classification temperature of 1300°C.

Benefits

- Exceptional thermal insulation performance compared with industry standards
- Free of binder or lubricant
- Thermal stability
- Low heat storage
- Good resistance to tearing
- Flexible and resilient
- Immune to thermal shock
- Good sound absorption
- Exonerated from any carcinogenic classification under note Q in Regulation EC No. 1272/2008 (page 335/353)

Typical Applications

- Power generation (HRSG duct insulation)
- Process heater linings
- Pipe wrap
- Furnace and kiln linings
- Storage heater insulation
- Domestic Oven insulation
- Automotive exhaust heat shields
- Aluminium transfer launder covers
- Welding stress relief

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Main Properties

Classification temperature	°C	1200
Maximum continuous use temperature	°C	1000
Colour		White
Density	kg/m ³	64, 96, 128
Typical tensile strength of 128 kg/m ³ density (EN 1094-1)	kPa	75
High Temperature Performance Permanent linear shrinkage after 24 hours isothermal heating at 1200°C	%	1

Thermal Conductivity ASTM C-201 (W/mK)

Mean Temp (°C)	64 kg/m ³	96 kg/m ³	128 kg/m ³
200	0.06	0.05	0.05
400	0.10	0.09	0.08
600	0.17	0.14	0.12
800	0.26	0.21	0.18
1000	0.38	0.29	0.25

Chemical Composition %

SiO ₂	62-68
CaO	26-32
MgO	3-7
Other	<1

Sound Absorption Coefficient

Frequency (Hz)	Sound Absorption Coefficient (SAC)							Sound Absorption Rating
	125	250	500	1000	2000	4000	Overall SAC	
Unfaced	0.15	0.75	1	1	1	0.75	1	Class A
Faced with glass cloth	0.4	0.95	0.95	0.85	0.8	0.65	0.8	Class B
Faced with 20µm reinforced aluminium foil	0.45	0.9	0.75	0.65	0.65	0.45	0.65	Class C

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