

Superwool® Plus Blanket

Description

Superwool® Plus offers the same benefits as the other members of the Superwool family but with improved handling strength and enhanced thermal properties. Superwool® Plus 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® product. It is available in a wide range of thicknesses and densities. It exhibits outstanding insulating properties at elevated temperatures.

Superwool® Plus Blanket has excellent thermal stability and retains its original soft fibrous structure up to its maximum continuous use temperature. Superwool® Plus is needed from both sides and possesses high strength, before and after heating. Superwool® Plus Blanket contains neither binder nor lubricant and does not emit any fumes or smell during the first firing. Superwool® Plus is flexible, easy to cut and shape and easy to install. (CAS number: 329211-92-9).

Classification Temperature

1200°C / 2192°F EN 1094

With Superwool® Plus, the consistent use of pure raw materials in all our factories Globally has lead 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 EN1094 norm.

Superwool® 607® has 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® 607HT® which has a classification temperature of 1300°C.

For further information, contact your local Thermal Ceramics division.



Typical Applications

- Power generation especially HRSG duct insulation
- Chimney insulation
- Process heater linings
- Pipe wrap
- Annealing furnace linings
- Furnace and kiln back-up insulation
- Storage heater insulation
- Domestic oven insulation
- Automotive exhaust heat shields
- Aluminium transfer launder covers
- Welding stress relief

SUPERWOOL® is a patented technology that manufactures high temperature insulation wool which has been developed to have low bio persistence (information upon request). This product may be covered by one or more of the following patents or patent applications, and foreign equivalents:
US 5332699, US 5714421, US 5811360, US 5821183, US 5928975, US 5955389, US 5994247, US 6180546, US 6861381, US 7153796, US 7259118, US2004/0254056, US2006/009458, EP 0621858, EP 0679145, EP 0710628, EP 1474366, EP1544177, EP1725503.

A list of foreign patent numbers is available upon request to The Morgan Crucible Company plc.
THERMAL CERAMICS, SUPERWOOL and 607 are trademarks of The Morgan Crucible Company plc.

Superwool® Plus Blanket

Main Properties

Colour: White
Specific gravity: 64, 96, 128, 160 kg/m³
 (4, 6, 8, 10) lbs/ft³
Tensile strength: 128 kg/m³ 75 kPa

Thermal Ceramics now manufactures Superwool Plus on a Global basis with plants qualified to achieve the standard product specification in all regions. 75 kPa is given as typical of the tensile strength which is produced in any TC plant. In some cases a higher tensile strength is achieved, even above 100 kPa.

High Temperature Performance

Permanent linear shrinkage after 24 hours isotherm heating at 1200°C <1%

Thermal Conductivity (ASTM C-201)

Following the decision by the European standards committee to withdraw the Thermal Conductivity test according to ENV1094 as being inaccurate, Thermal Ceramics has decided to quote all Thermal Conductivity data according to the well established ASTM C201 method.

Mean Temperature		64 kg/m ³ 4 lbs/ft ³	96 kg/m ³ 6 lbs/ft ³	128 kg/m ³ 8 lbs/ft ³	160 kg/m ³ 10 lbs/ft ³
W/m.K	(BTU in/hr/ft ² /°F)				
200 °C	392 °F	0.06 (0.42)	0.05 (0.35)	0.05 (0.33)	0.05 (0.32)
400 °C	752 °F	0.10 (0.69)	0.09 (0.62)	0.08 (0.55)	0.08 (0.54)
600 °C	1112 °F	0.17 (1.18)	0.14 (0.97)	0.12 (0.83)	0.11 (0.79)
800 °C	1472 °F	0.26 (1.80)	0.21 (1.46)	0.18 (1.25)	0.16 (1.11)
1000 °C	1832 °F	0.38 (2.63)	0.29 (2.01)	0.25 (1.73)	0.22 (1.49)

Chemical Composition

SiO₂: 62-68%
CaO: 26-32%
MgO: 3-7%
Other: <1%

Availability & Packaging

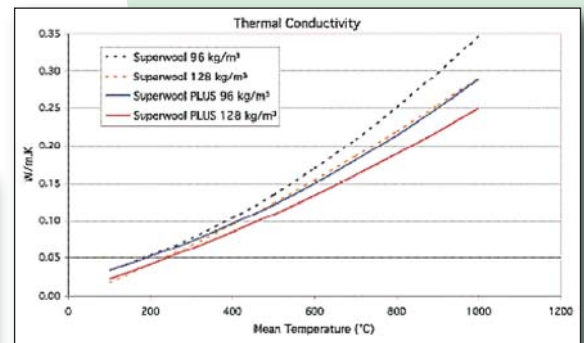
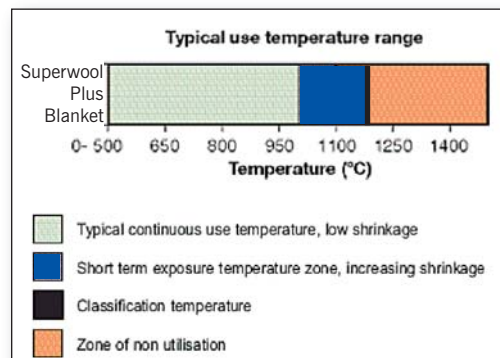
Superwool Plus Blankets are packed in cartons, 1260 x 940mm pallet + stretchable film.

Thickness mm	Density kg/m ³				Length mm	Width mm	m ² / carton
	64	96	128	160			
6		×	×	•	5500 x 4	610	13.42
10		×	×	•	18500	610	11.28
13		×	×	×	14640	610	8.93
19	•	×	×	×	9760	610	5.95
25	×	×	×	×	7320	610	4.46
38	×	×	×		4880	610	2.98
50	•	×	×	•	3660	610	2.23
63*		•	•		2300 x 3	610	4.21

Densities marked • and width of 1220mm are available upon request (subject to minimum order requirements). * Denotes non-standard product - available upon request.

Benefits

- Exceptional thermal insulating 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 nota Q of directive 97/69EC



The values given herein are typical average 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.