

## Superwool® Plus Blanket



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MSDS Code EU: 105 US: 350

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### Description

Superwool® Plus blanket offers the same benefits as the other members of the Superwool fibre family but with improved handling strength and enhanced thermal properties. 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 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 blanket 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 blanket is flexible, easy to cut and shape and easy to install. (CAS number: 329211-92-9).

### Classification Temperature

1200°C / 2192°F EN 1094-1

With Superwool® Plus fibre, the consistent use of pure raw materials in our factories globally has led to the 1% 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® 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, Morgan Thermal Ceramics recommends Superwool® 607HT® fibre which has a classification temperature of 1300°C.

For further information, contact your local Morgan Thermal Ceramics office.

### 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

### 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

SUPERWOOL® is a patented technology for high temperature insulation wools which have been developed to have a low bio persistence (information upon request). This product may be covered by one or more of the following patents, or their foreign equivalents:- SUPERWOOL® by patent numbers:- US5714421, US5994247, US6180546, US7259118, and EP0621858. SUPERWOOL® numbers:- US5955389, US6180546, US7259118, US7470641, US7651965, US7875566, EP0710628, EP1544177, and EP1725503. A list of foreign patent numbers is available upon request to The Morgan Crucible Company plc.

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## Superwool® Plus Blanket



### Main properties

Classification temperature	1200°C
Maximum continuous use temperature	1000°C
Colour:	White
Density:	64, 80, 96, 128, 160 kg/m <sup>3</sup> (4, 5, 6, 8, 10) lbs/ft <sup>3</sup>
Tensile strength:	128 kg/m <sup>3</sup> 75 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 EN 1094-1 as being inaccurate, Morgan Thermal Ceramics has decided to quote all Thermal Conductivity data according to the well established ASTM C-201 method.

Mean Temperature (BTU.in/hr/ft <sup>2</sup> /°F)		Thermal conductivity (ASTM C-201):			
		64 kg/m <sup>3</sup> 4 lbs/ft <sup>3</sup>	80 kg/m <sup>3</sup> 5 lbs/ft <sup>3</sup>	96 kg/m <sup>3</sup> 6 lbs/ft <sup>3</sup>	128 kg/m <sup>3</sup> 8 lbs/ft <sup>3</sup>
200°C	392 °F	0.06 (0.42)	0,06 (0,42)	0,05 (0,35)	0,05 (0,33)
400°C	752 °F	0.11 (0.76)	0,09 (0,62)	0,09 (0,62)	0,08 (0,55)
600°C	1112 °F	0.18 (1.24)	0,15 (1,04)	0,14 (0,97)	0,12 (0,83)
800°C	1472 °F	0.29 (2.00)	0,24 (1,66)	0,21 (1,46)	0,18 (1,25)
1000°C	1832 °F	0.42 (2.9)	0,36 (2,49)	0,29 (2,01)	0,25 (1,73)

### Chemical Composition

SiO<sub>2</sub>: 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.  
Contact your local Morgan Thermal Ceramics sales office for advice on availability.

Thickness mm	64 kg/m <sup>3</sup>	80 kg/m <sup>3</sup>	96 kg/m <sup>3</sup>	128 kg/m <sup>3</sup>	160 kg/m <sup>3</sup>	Length mm	Width mm	m <sup>2</sup> /carton
6				X		4 x 5500	610	13.42
10			X	X		18500	610	11.28
13		X	X	X	X	14640	610	8.93
19	X	X	X	X	X	9760	610	5.95
25	X	X	X	X	X	7320	610	4.46
38	X	X	X	X		4880	610	2.98
50	X	X	X	X		3660	610	2.23

Densities marked  and width of 1220mm are available upon request (subject to minimum order requirements).

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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