Superwool® Plus Blanket

Datasheet Code EU: 11-5-01 E US: 11-14-401 MSDS Code EU: 105 US: 350

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 needled 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 lead 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® 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, Morgan Thermal Ceramics recommends Superwool® HT® 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® PLUS™ products are covered by patent numbers:- US5714421, US5994247, US6180546, US7259118, and EP0621858. SUPERWOOL® 607HT™ products are covered by patent 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.

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^3 (4, 5, 6, 8, 10) lbs/ft3
Tensile strength:	128 kg/m^3 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.

		Thermal conductivity (ASTM C-201):			
Mean Temperature W/mK (BTU.in/hr/ft²/°F)		**64 kg/m^3 4 lbs/ft^3**	**80 kg/m^3 5 lbs/ft^3**	**96 kg/m^3 6 lbs/ft^3**	**128 kg/m^3 8 lbs/ft^3**
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_2: 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^3	80 kg/m^3	96 kg/m^3	128 kg/m^3	160 kg/m^3	Length mm	Width mm	m^2/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).