Superwool® Prime Blankets

Product Data Sheet

Product Description

Superwool Prime Blankets, our newest fibre chemistry for applications requiring high performance with a classification temperature of 1300°C (2370°F), feature exceptional thermal and physical properties. Superwool Prime Blankets made using patented low shot technology offer improved mechanical performance with exceptional handleability. In addition, the blankets are flexible, soft to the touch, and less irritating during use due to the low shot fibre.

Superwool Prime Blankets exhibit outstanding insulating properties at elevated temperatures. Superwool Prime Blankets have excellent thermal stability and retain their original soft fibrous structure to its maximum continuous use temperature. Superwool Prime Blankets do not contain binder or lubricant and do not emit any fumes or smell during the first firing.

Features

- Superior thermal conductivity
- Classification temperature of 1300°C (2370°F)
- Excellent handleability, flexibility, and tensile strength
- Low biopersistent fibre results in no carcinogen classification labelling

Benefits

- Improved energy efficiency and heat storage from better insulation system providing opportunity for reduced CO2 emissions
- Excellent thermal performance in applications requiring high-temperatures allowing for design flexibility
- High tensile strength offers excellent choice in applications requiring more handling, flexing or vibration

Product Availability

Superwool Prime Blankets are available in the following thicknesses by density. Please contact your regional Morgan Advanced Materials - Thermal Ceramics representative to support providing specific packaging availability for your local business needs.

Thickness, mm (in)	Density, kg/m^3 (pcf)				
	64 (4)	80 (5)	96 (6)	128 (8)	160 (10)
6 (0.24)				X	
13 (0.51)	X		X	X	
25 (0.98)	X	X	X	X	X
38 (1.52)			X	X	
50 (1.97)			X	X	

Environmental & Health Safety

Superwool low biopersistent fibres are exonerated and are not classified as carcinogenic by IARC or under any national regulations on a global basis. They have no requirements for warning labels under GHS (Globally Harmonised System for the classification and labelling of chemicals).

In Europe, Superwool fibres meet the requirements specified under NOTE Q of European Directive 67/548. All Morgan Advanced Materials Superwool low biopersistent fibre products are therefore exempt from the classification and labelling regulation in Europe.

www.morganthermalceramics.com
Email: marketing.tc@morganplc.com
Thermal Ceramics is a business of Morgan Advanced Materials

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Properties	Superwool Prime Blanket
Colour	White
Classification Temperature, °C (°F), EN 1094-1 (2008)	1300 (2370)
Continuous Use Temperature, °C (°F)	1150-1200 (2100-2190)
Melting Temperature, °C (°F)	1438 (2600)
Density, kg/m^3 (pcf), EN 1094-1 (2008)	64, 80, 96, 128, 160 (4, 5, 6, 8, 10)
Tensile Strength, kPa (psi), EN 1094-1	
Measured Density, 64 kg/m^3 (4 pcf)	25 (3.62)
80 (5)	37 (5.37)
96 (6)	50 (7.25)
128 (8)	72 (10.44)
160 (10)	105 (21.75)
Chemical Analysis, % weight basis after firing	
Silica, SiO_2	64 - 70
Calcium oxide, CaO	29 - 35
Other	<3

Thermal Conductivity, W/m•K, per ASTM C201	Superwool Prime Blanket				
Density, kg/m^3 (pcf)	64 (4)	80 (5)	96 (6)	128 (8)	160 (10)
200°C	0.07	0.06	0.06	0.05	0.06
400°C	0.12	0.10	0.10	0.09	0.09
600°C	0.19	0.17	0.16	0.13	0.13
800°C	0.31	0.26	0.23	0.20	0.18
1000°C	0.46	0.38	0.33	0.28	0.25
1200°C	0.64	0.53	0.45	0.38	0.33
Thermal Conductivity, BTU•in/hr•ft^2, per ASTM C201					
500°F	0.56	0.48	0.49	0.42	0.47
1000°F	1.16	1.00	0.95	0.81	0.80
1500°F	2.22	1.87	1.67	1.42	1.30
1832°F	3.19	2.64	2.29	1.94	1.73
2000°F	3.74	3.10	2.66	2.25	1.98
2200°F	4.48	3.69	3.13	2.65	2.30

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