

Data sheet

Superwool® XTRA Paper

ENGLISH

Product data - Page 2

Description

Superwool® XTRA Paper is made of Superwool® XTRA bulk fibres and organic binders. Superwool® XTRA paper is specially processed to offer excellent performance in high-temperature applications.

Superwool® XTRA paper provides stability and resistance to chemical attack and is unaffected by incidental spills of oil or water. Thermal and physical properties are restored after drying. It has excellent thermal insulation characteristics and exceptional handling properties.

Very flexible and resistant to tearing, Superwool® XTRA Paper is particularly suited to all applications requiring further processing (laminated composites, die-cutting, rolling, folding).

The organic binder burns out cleanly on the first firing at approximately 300°C (572°F), with ignition starting at 180°C (356°F).

Type

Paper manufactured from high temperature insulation wool.

Classification temperature

1400°C (EN 1094-1) 2600°F (ASTM C892-17)

The maximum continuous use temperature depends on the application. For further advice please contact your local Thermal Ceramics partner.

Melting point

Superwool® XTRA has a melting point of 1650°C (3000°F).

Benefits

- Exonerated from any carcinogenic classification under Nota Q of directive 97/69EC, certificate available on request
- Thin, flexible high temperature insulation
- Very low thermal conductivity
- Thermal stability
- Excellent thermal insulating performances and low heat storage
- Immune to thermal shock
- Does not form crystalline silica when exposed to high temperatures
- Excellent resistance to chemicals and pollutants, especially alkali metals
- No reaction with alumina based bricks in application in the range of the typical use temperature
- Low shot content
- Excellent tensile strength
- Easily die-cut to form complex shapes for high temperature gasketing
- Good resistance to tearing
- High flexibility
- Precise thickness
- Smooth on both sides



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Physical properties (measured at ambient conditions 23°C/50% RH)		Superwool® XTRA Paper
Classification temperature	°C (°F)	1400 (2550)
Melting point	°C (°F)	1650 (3000)
Typical properties		
Colour		White
Density, average	kg/m ³ (pcf)	190 - 210 (12 - 13)
Tensile Strength (EN 1094-1), MPa		> 0.45
High temperature performance		
Loss of Ignition	%	8
Permanent linear shrinkage (EN 1094-1) after 24 hours isothermal heating, % @1400°C		< 3
Permanent linear shrinkage (ASTM C892-17) after 24 hours isothermal heating, % @2550°F		< 3
Thermal conductivity W/m.K, (ASTM C-201) (BTU in/hr ft ² F) 190kg/m ³ at mean temperature of:		
200°C (390°F)		0.05 (0.35)
400°C (750°F)		0.08 (0.56)
600°C (1110°F)		0.13 (0.90)
800°C (1470°F)		0.21 (1.46)
1000°C (1830°F)		0.30 (2.08)
1200°C (2190°F)		0.41 (2.84)
Chemical composition, %		
Al ₂ O ₃		32 - 38
SiO ₂		27 - 33
K ₂ O		23 - 28
ZrO ₂		5 - 9
MgO		0.5 - 1.5
Other oxides		< 0.5

Availability and packaging

Thickness mm	Length m
1	40
2	20
3	15
4	10
5	10
6	10
7	10
8	10
9	10
10	10

Contact

Europe:

 Telephone:
+44 (0) 151 334 4030

 E-mail:
marketing.tc@morganplc.com

North America:

 Telephone:
+1 (706) 796 4200

 E-mail:
northamerica.tc@morganplc.com

South America:

 Telephone:
+54 (11) 4373 4439

 E-mail:
marketing.tc@morganplc.com

Asia:

 Telephone:
+65 6595 0000

 E-mail:
asia.mc@morganplc.com

Whilst the values and application information in this datasheet are typical, they are given for guidance only. The values and the information given are subject to normal manufacturing variation and may be subject to change without notice. Morgan Advanced Materials – Thermal Ceramics makes no guarantees and gives no warranties about the suitability of a product and you should seek advice to confirm the product's suitability for use with Morgan Advanced Materials - Thermal Ceramics.

SUPERWOOL® is a patented technology for high temperature insulation wools which have been developed to have a low bio persistence (information upon request). **SUPERWOOL®** products may be covered by one or more of the following patents, or their foreign equivalents:

SUPERWOOL® PLUS and **SUPERWOOL® HT** products are covered by patent numbers: US5714421 and US7470641, US7651965, US7875566, EP1544177 and EP1725503 respectively.

SUPERWOOL® XTRA products are covered by patent number: US8088701 and EP2086897B1.

A list of foreign patent numbers is available upon request to Morgan Advanced Materials plc.

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