



Superwool[®] XTRA Blankets

Product Data Sheet

Product Description

Superwool XTRA Blanket is manufactured using our patented Superwool XTRA composition and technology. Our newest innovation **does not form respirable crystalline silica** and is designed to offer **excellent performance in demanding high temperature applications**.

Superwool XTRA Blanket exhibits outstanding insulating properties at elevated temperature and retains its original soft fibrous structure up to maximum continuous use temperature*.

Superwool XTRA Blanket has excellent thermal stability. It is flexible, easy to cut, shape and easy to install.

Superwool XTRA Blanket contains neither a binder or lubricant and does not emit any fume or smell during the first firing.

Features

- Excellent thermal stability results in reliable and consistent thermal insulating performances:
 - Immune to thermal shock
 - Binder or lubricant free
 - Thermal stability
 - Low heat storage
- Does not form crystalline silica when exposed to high temperatures
- Excellent tensile strength results in:
 - Strong resistance to tearing
 - Excellent flexibility and resiliency
- Good sound absorption

Applications

Superwool XTRA Blanket is supplied in two different blanket types:

- Standard designed for consumable applications such as Submerged Entry Nozzles
- Blanket M designed for Blanket Module Systems used in lining designs for kilns and applications such as Ethylene Crackers, Forge Furnaces, Coking plants

Environmental & Health Safety

Superwool low biopersistent fibres manufactured by Morgan Advanced Materials 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 Regulation EC/1272/2008 (on Classification, Labelling and Packaging of substances and mixtures). All Morgan Advanced Materials Superwool low biopersistent fibre products are therefore exonerated from classification and labelling as hazardous in Europe.

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| Properties | | Superwool XTRA Blankets |
|--|---|-------------------------|
| Colour | | White |
| Classification Temperature, °C (°F) | | 1450 (2600) |
| Continuous Use Temperature, °C (°F) | | Application Dependent |
| Melting Temperature, °C (°F) | | 1650 (3000) |
| Density, kg/m ³ (pcf) | | 96, 128, 160 (6, 8, 10) |
| Tensile Strength, kPa (psi), EN 1094-1 (2008) | | |
| | Measured Density, kg/m ³ (pcf), 96 (6) | >45 (>6.53) |
| | 128 (8) | >70 (>10.15) |
| | 160 (10) | >90 (>13.05) |
| Permanent Linear Shrinkage, % EN 1094-1 (2008) | | |
| | After 24 hours 1450°C (2600°F) | <4 |
| Chemical Analysis, % | | |
| | Alumina, Al ₂ O ₃ | 32 - 38 |
| | Silica, SiO ₂ | 27 - 33 |
| | Potassium oxide, K ₂ O | 23 - 28 |
| | Zirconia oxide, ZrO | 5 - 9 |
| | Magnesium oxide, MgO | 0.5 - 1.5 |
| | Other oxides | <0.5 |

| Thermal Conductivity, W/m·K (BTU·in/hr·ft ²), per ASTM C201 | | | | |
|---|----------------------------------|-------------|-------------|-------------|
| Superwool XTRA Blankets | | | | |
| | Density, kg/m ³ (pcf) | 96 (6) | 128 (8) | 160 (10) |
| 200°C (392°F) | | 0.07 (0.49) | 0.07 (0.49) | 0.06 (0.42) |
| 400°C (752°F) | | 0.11 (0.76) | 0.10 (0.69) | 0.09 (0.62) |
| 600°C (1112°F) | | 0.18 (1.25) | 0.16 (1.11) | 0.14 (0.97) |
| 800°C (1472°F) | | 0.30 (2.08) | 0.27 (1.87) | 0.23 (1.60) |
| 1000°C (1832°F) | | 0.46 (3.19) | 0.42 (2.91) | 0.34 (2.36) |
| 1200°C (2192°F) | | 0.67 (4.65) | 0.60 (4.16) | 0.49 (3.40) |

Product Availability

Superwool XTRA Blankets are manufactured and available globally, but packaging, density and thickness vary by region. 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, kgm ³ (pcf) | | | Length, m (ft) | Width, mm (in) | Carton, m ² (ft ²) |
|--------------------|---------------------------------|---------|----------|-----------------|----------------|---|
| | 96 (6) | 128 (8) | 160 (10) | | | |
| 6 (0.24) | | • | | 4 x 5.5 (18.15) | 610 (24.4) | 13.42 (144.4) |
| 13 (0.52) | • | • | • | 14.64 (48.31) | 610 (24.4) | 8.93 (96.1) |
| 19 (0.76) | • | • | • | 9.76 (32.21) | 610 (24.4) | 5.95 (64) |
| 25 (1) | • | • | • | 7.32 (24.16) | 610 (24.4) | 4.46 (48) |
| 38 (1.52) | • | • | | 4.88 (16.10) | 610 (24.4) | 2.98 (32) |
| 50 (2) | • | • | | 3.66 (12.08) | 610 (24.4) | 2.23 (24) |

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.