



Superwool[®] Plus and HT Boards and Shapes

Product Data Sheet

Product Description

Superwool Plus and Superwool HT Boards are made from our patented Superwool low biopersistent fibres. These organic boards are manufactured using pure raw materials and the latest Vacuum Forming technology, to offer excellent thermal and physical performance features in high-temperature applications.

Superwool Plus and Superwool HT Boards have high refractoriness and excellent non-wetting characteristics with molten aluminium. Superwool fibres provide excellent stability and resistance to most types of chemical attacks.

Lower thermal conductivity, superior mechanical properties and high-temperature stability offer unmatched performance reliability of the Superwool Plus and Superwool HT Boards. If wet by water, steam or oil, thermal and physical properties are restored upon drying.

Superwool Plus and Superwool HT Boards are ideally suited to a wide range of applications and are available in various dimensions. The continuous use temperature depends upon the application and we encourage contacting your regional Morgan Advanced Materials - Thermal Ceramics representative to support specific application requirements.

Features

- Rigid, self-supporting, fibre insulating board
- Very low thermal conductivity
- Opportunity to reduce backup insulation thickness up to 50% when replacing insulating firebrick or castable
- Low heat storage
- Good thermal shock resistance allows use in applications with large variations in temperature and cyclic operation
- Non-wetting to molten aluminium
- Good machinability for cutting and shaping to different sizes and shapes

Applications

- Furnace, Kiln, and Oven hot face and backup linings
- Insulation backup to:
 - Firebrick and insulating firebrick
 - Refractory monolithics utilizing rammed linings or shapes
- Flue and Chimney linings, Hot gas duct lining
- Ingot mould hot tops
- Applications with direct molten aluminium contact
- Consumer appliances like ovens, water heaters, night storage heaters
- Gaskets, Seals, Expansion joints
- Molten Metal trough covers
- Heat Shields for personal protection
- Heat processing equipment

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 Plus LDIN Board	Superwool HT LDIN Board	Superwool Plus Shape 1200	Superwool Plus Tapout Cone
Color	White to Tan	White to Tan	White to Tan	White
Classification Temperature, °C (°F), ISO 10635	1200 (2192)	1300 (2372)	1200 (2192)	1200 (2192)
Continuous Use Temperature, °C (°F)	1000 (1832)	1200 (2192)	1100 (2012)	1100 (2012)
Density, kg/m ³ (pcf), ASTM C612-14	260(16.2)	240 (15)	260(16.2)	230(14.4)
Compressive strength, 10% deformation, MPa (psi), ASTM C165				
Below 25 mm Thick	0.1	0.10	-	-
Above 25 mm Thick	0.08	0.08	-	-
Permanent Linear Shrinkage, %, 24 hours, ISO 10635				
1200°C (2192°F)	4%	4%	4%	-
1300°C (2372°F)	-	-	-	4%
Modulus of Rupture, MPa (psi), ASTM C165				
Below 25 mm Thick (1 in)	0.5(72)	0.5(72)	-	-
Above 25 mm Thick (1 in)	0.2(29)	0.2(29)	-	-
Loss of Ignition, LOI, %	10%	10%	10%	10%
Chemical Composition, %				
Silica, SiO ₂	60	64-66	60	70
Calcium oxide, CaO	31	27-31	38	23
Thermal Conductivity, W/m•K (BTU•in/hr•ft²), per ASTM C201				
200°C (392°F)	-	-	0.06 (0.42)	0.06 (0.44)
400°C (752°F)	-	-	0.08 (0.55)	0.09 (0.63)
600°C (1112°F)	-	-	0.12 (0.83)	0.13 (0.88)
800°C (1472°F)	-	-	0.16 (1.11)	-
1000°C (1832°F)	-	-	0.21 (1.46)	0.22 (1.54)
1200°C (2192°F)	-	-	0.27(1.87)	-

Product Availability

Standard dimension: Length 1200 mm x Width 1000mm x Thickness 5 to 75 mm

Superwool Plus and Superwool HT Boards and Shapes are manufactured and available globally, but packaging, density, thickness, width and length vary by region. Please contact your regional Morgan Advanced Materials - Thermal Ceramics representative to support providing specific packaging availability for your local business needs.

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.