



Superwool[®] Prime Board

Product Data Sheet

Product Description

Superwool Prime Board is manufactured using Morgan's newest low biopersistent fibre chemistry with a classification temperature of 1300°C (2372°F).

The use of the patented low-shot fiberisation technology, ultra-pure raw materials and state of the art forming process offers excellent thermal and physical features to this board, coupled with very high-temperature capability. As a result, Superwool Prime Board has high refractoriness and excellent non-wetting characteristics. In addition, Superwool fibres provide excellent stability and resistance to most types of chemical attacks.

Low thermal conductivity, superior mechanical properties and high-temperature stability offer unmatched performance and reliability to the Superwool Prime Board. If wet by water, steam or oil, thermal and physical properties are restored upon drying.

Superwool Prime Board is ideally suited to various applications and is available in multiple dimensions. The continuous use temperature depends upon the application. We encourage contacting your regional Morgan Advanced Materials - Thermal Ceramics representative to support you with your specific application requirement.

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 Prime Board
Colour		White
Fibre Grade, Organic or Inorganic		Organic
Classification Temperature, °C (°F), ISO 10635		1300 (2372)
Continuous Use Temperature, °C (°F)		1200 (2192)
Density, kg/m ³ (pcf), ASTM C612-14		340 (21.2)
Compressive Strength, 10% deformation, MPa (psi), ASTM C165		0.35 (51)
Permanent Linear Shrinkage, %, ISO 10635		
	1200°C (2192°F)	<2.5
	1300°C (2372°F)	<3.0
Modulus of Rupture, Unfired, MPa (psi), ASTM C165		1.0 (145)
Loss of Ignition, @ 650°C (1202°F), %		<8.5
Chemical Analysis, %		
	Alumina, Al ₂ O ₃	trace
	Silica, SiO ₂	65 - 75
	Calcium oxide, CaO	26 - 32
	Magnesium oxide, MgO	<0.5
	Other	<0.5
Thermal Conductivity, W/m·K (BTU·in/hr·ft ² ·°F), ASTM C201		
	200°C (392°F)	0.07 (0.49)
	400°C (752°F)	0.09 (0.62)
	600°C (1112°F)	0.12 (0.83)
	800°C (1472°F)	0.16 (1.11)
	1000°C (1832°F)	0.20 (1.39)
	1200°C (2192°F)	0.25 (1.73)

Product Availability

Superwool Prime Board is 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.

The product(s) represented are intended for industrial refractory applications. The values and application information in this datasheet 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.