

Superwool[®] Plus Blok Panels

Product Data Sheet



Product Description

Superwool Plus Blok Panels are made from Superwool Plus fibres, mineral fibres and a small amount of organic binder. Due to this high fibre content, Superwool Plus Blok Panels are strong, lightweight and thermal shock resistant.

All grades of Superwool Plus Blok Panels receive a water repellence treatment to prevent absorption of water or concrete binders. Superwool Plus Blok 1100LQ is a low quartz grade of Superwool Plus Blok 1100.

The panels must be installed so that the side with the product name is in contact with the concrete. When tested on this side, Superwool Plus Blok Panels are classified as non-hydrophilic (NF P 75-305).

Thicknesses over 50mm are obtained by layering together two thinner sheets. For Superwool Plus Blok 800 Panels, it is 60mm.

Features

- Water repellent
- Resistant to thermal shock
- Good resistance to temperature cycling
- Low thermal conductivity
- Precise geometry and close tolerances
- Homogeneous structure, easy for machining
- Non-brittle
- High fibre content
- Exonerated from any carcinogenic classification
- Lightweight, low heat storage
- Easy to install

Applications

- Backup insulation for bricks (IFB) and monolithics
- Standalone refractory insulation
- CPI furnaces
- Tunnel kilns
- Ladle backup
- Aluminium pot cells
- Float glass furnace backup

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 NOTA 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.

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Properties	Superwool Plus Blok 800	Superwool Plus Blok 1000	Superwool Plus Blok 1100	Superwool Plus Blok 1100 LQ	Superwool Plus Blok AL
Region of Manufacture	Europe				
Color	White/Tan				
Classification Temperature, °C (°F)	1000 (1832)	1100 (2012)	1100 (2012)	1100 (2012)	1000 (1832)
Density, kg/m ³ (pcf)	320 (19.97)	320 (19.97)	320 (19.97)	320 (19.97)	320 (19.97)
Modulus of Rupture, MPa (psi)	0.7 (101.5)	0.8 (116)	0.8 (116)	0.9 (130.5)	0.8 (116)
Compressive strength @ 10% deformation, MPa (psi)	0.3 (43.5)	0.3 (43.5)	0.3 (43.5)	0.3 (43.5)	0.3 (43.5)
Loss of Ignition, LOI, % after 2 hours heating @ 800°C (1472°F)	5.5	5.0	5.0	5.0	5.5
Water absorption after 2 hours, %	2	2	2	2	2
Permanent Linear Shrinkage, %, 24 hours, ENV (1094-1)					
1000°C (1832°F)	1.4	-	-	-	2.0
1100°C (2012°F)	-	1.4	1.3	1.3	-
Chemical Analysis, %					
Alumina, Al ₂ O ₃	13.9	15.1	10.1	16.2	18.7
Silica, SiO ₂	61.2	59.4	59.5	56.5	54.0
Calcium oxide + Magnesium oxide, CaO + MgO	18.3	19.4	28.2	24.6	20.9
Ferric oxide + Titanium oxide, Fe ₂ O ₃ + TiO ₂	3	3.8	1.2	1.3	4.7
Alkalis, as Na ₂ O+K ₂ O	3.6	2.3	1	1.4	2.4
Thermal Conductivity, W/m•K (BTU•in/hr•ft²), per ASTM C201					
200°C (392°F)	0.05 (0.35)	0.06 (0.42)	0.05 (0.35)	0.05 (0.35)	0.05 (0.35)
300°C (572°F)	0.05 (0.35)	0.06 (0.42)	0.06 (0.42)	0.06 (0.42)	-
400°C (752°F)	0.06 (0.42)	0.07 (0.49)	0.07 (0.49)	0.07 (0.49)	0.07 (0.49)
500°C (932°F)	0.07 (0.49)	0.09 (0.62)	0.08 (0.56)	0.08 (0.56)	-
600°C (1112°F)	0.08 (0.56)	0.1 (0.69)	0.09 (0.62)	0.09 (0.62)	0.1 (0.69)
800°C (1472°F)	0.12 (0.83)	0.13 (0.90)	0.12 (0.83)	0.12 (0.83)	0.13 (0.90)
900°C (1652°F)	-	-	-	-	0.14 (0.97)
1000°C (1832°F)	-	-	0.16 (1.11)	0.16 (1.11)	-

Product Availability

Superwool Plus Blok are manufactured and packaged for Europe regional business. Please contact your regional Morgan Advanced Materials - Thermal Ceramics representative to support packaging availability for your regional business needs.

Standard sizes, mm (in)	1000 x 600 (39.4 x 23.6)
Thickness, mm (in)	25mm, 30mm, 40mm, 50mm, 60mm, 70mm, 80mm, 90mm and 100mm (1in, 1.2in, 1.6in, 2in, 2.4in, 2.75in, 3.15in, 3.5in, 3.9in) <i>Thicknesses over 50mm (2in) are obtained by bonding together two thinner sheets except for Blok 800 which is available in 60mm (2.4in)</i>
Packaging details	Superwool Plus Blok Panels are packed on pallets. 1225mm x 1020mm (48in x 40in). Protected with cardboard and shrink wrapped with recyclable plastic.

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.