

Superwool® Plus VF Products



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Type

Vacuum formed shapes & boards manufactured from high temperature insulation wool.

Classification Temperature

1200°C

For further information, contact your local Morgan Thermal Ceramics office.

Description

Superwool® Plus™ VF is a vacuum formed insulating product made from a mixture of Superwool® Plus™ fibres, refractory constituents and organic binders.

Vacuum-forming allows the production of a variety of configurations, tailored to the particular application and ranging from simple sections (such as tubes, cones and flat shapes) to complex shapes (such as combustion chambers).

Good cohesive strength, high operating temperature and excellent insulating properties make Superwool® Plus™ VF suitable for various applications.

Superwool® Plus™ Strong VF is produced by the addition of selected refractory fillers in order to maximize the mechanical properties and the resistance to erosion of the final product.

Benefits

- Easy to use
- 'Tailor made' shapes
- Homogeneous structure
- Low thermal conductivity
- Good erosion resistance and rigidity
- Excellent thermal shock resistance
- Low heat storage, lightweight
- Not affected by the presence of molten aluminium
- Flame resistant
- Easy to machine
- Exonerated from any carcinogenic classification under nota Q of directive 97/69 EC
- Exonerated from any use restriction under annexe V number 7.1 of the German hazardous substances regulation

SUPERWOOL® is a patented technology for high temperature insulation wools which have been developed to have a low bio-persistence (information upon request). This product may be covered by one or more of the following patents, or their foreign equivalents:- SUPERWOOL® PLUS™ products are covered by patent numbers:- US5714421, US5994247, US6180546, US7259118, and EP0621858. SUPERWOOL® 607HT™ products are covered by patent numbers:- US5955389, US6180546, US7259118, US7470641, US7651965, US7875566, EP0710628, EP1544177, and EP1725503. A list of foreign patent numbers is available upon request to The Morgan Crucible Company plc.

Superwool[®] Plus VF Products



Main properties

	°C	Superwool [®] Plus [™] Vacuum Form	Superwool [®] Plus [™] Strong Vacuum Form
Classification Temperature		1200	1200

Properties Measured at Ambient Conditions (23°C/50% RH)

• Colour		white/tan	white/tan
• Density	kg/m ³	280	380
• Shrinkage after 24 hours at 1100°C	%	< 2%	< 2%
• Approx. weight loss on 1st firing	%	5-7	5-7
• Modulus of rupture			
Unfired	MPa	1.15	2.01
Fired	MPa	0.52	0.9
Burnt out at 650°C			
• Compressive strength unfired			
5% compression	MPa	0.13	0.30
10% compression	MPa	0.16	0.38

High Temperature Performance

- Thermal conductivity (ASTM C-201)
at mean temperature of:

Thermal Conductivity (ASTM C-201)			
Mean Temperature		Superwool [®] Plus [™] Vacuum Form	Superwool [®] Plus [™] Strong Vacuum Form
400°C	W/m.K	0.08	0.09
600°C	W/m.K	0.12	0.12
800°C	W/m.K	0.16	0.14
1000°C	W/m.K	0.20	0.17

The values given herein are typical values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your Thermal Ceramics office to obtain current information.