

## Superwool® HT Thermo-Bloc Modules

06/2016



### Type

Mechanically-fixed fibre modules made from high temperature insulation wool, designed for fast installation into industrial furnaces.

### Classification Temperature

1300°C (EN1094-1)

The maximum use temperature depends on the application. Please contact Morgan Thermal Ceramics for advice.

### Dimensions

#### • Width and length:

Square 305 x 305mm (anchor width 150mm)

#### • Thickness:

100mm up to 300mm, with 25mm increments

### Description

Description Superwool® HT™ Thermo-Bloc™ modules are manufactured from two sections of Superwool® HT Pyrolog® slabs in edge-grain orientation. These are held in position by a 6 faces polythene plastic film that ensures also the mechanical protection of the fibre and the protection of the installers from dust exposure.

Superwool® HT™ Thermo-Bloc™ Modules are installed with a pre-studded, external, side-fixed yoke. This system permits the introduction of backing blankets and of anticorrosion treatments of the casing, following the design of the customers or with Thermal Ceramics anchor designs. For special roof applications, the two sections of Superwool® HT™ Pyrolog™ slabs can be held in position by two additional stainless steel tubes mounted transversely through the modules and remote from the hot face. The side fixed yokes fit in these tubes.

The design of linings made with Superwool® HT™ Thermo-Bloc™ Modules can be completed with the use of special shapes obtained from Superwool HT Pyrolog slabs to line corners, noses and other particular zones.

Superwool® HT™ Thermo-Bloc™ are available in 2 density grades 160 and 192kg/m<sup>3</sup>.

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.

[www.morganthermalceramics.com](http://www.morganthermalceramics.com)

Europe: +44 (0) 151 334 4030 / [marketing.tc@morganplc.com](mailto:marketing.tc@morganplc.com)

North America: +1 (0) 706 796 4200 / [northamerica.tc@morganplc.com](mailto:northamerica.tc@morganplc.com)

South America: +54 (11) 4373 4439 / [marketing.tc@morganplc.com](mailto:marketing.tc@morganplc.com)

Asia: +65 (0) 6595 0000 / [asia.mc@morganplc.com](mailto:asia.mc@morganplc.com)

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### Benefits

- High un-compressed densities give low thermal conductivity
- High un-compressed densities give a more uniform and faster installation
- Lubricated fibre allows more uniform compression and tight joints
- Hardening effect on first firing gives a tough hot face, resistant to mechanical damage and gas flow abrasion
- Resistance to weathering permits limited outside application
- The polythene plastic film envelop ensures the protection of the installer from dust exposure
- The Pyro-Log system allows for modification either on site or factory pre-cut, without any directional limitation, to accommodate awkward casing configurations
- Use of standard, commercially available welding equipment
- Exonerated from any carcinogenic classification under nota Q of directive 97/69 EC

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**Europe:** +44 (0) 151 334 4030 / [marketing.tc@morganplc.com](mailto:marketing.tc@morganplc.com)

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**Main properties**

<b>Classification temperature</b>	<b>°C</b>	<b>1300</b>
Properties Measured at Ambient Conditions (23°C/50% RH)		
Colour		white
Density uncompressed	kg/m <sup>3</sup>	160, 192
<b>High Temperature Performance</b>		
Loss on ignition after 2 hours at 800°C	%	< 0.25
Specific heat capacity at 1090°C kJ/kg.		1.22
<b>Permanent linear shrinkage after 24 hours isothermal heating at:</b>		
1100°C	%	0.5
1200°C	%	0.8

**Thermal conductivity (ASTM-C201) at mean temperature of:**

	160kg/m <sup>3</sup>	192kg/m <sup>3</sup>
400°C W/m.K	0.14	0.12
600°C W/m.K	0.21	0.17
800°C W/m.K	0.30	0.25
1000°C W/m.K	0.40	0.33

**Availability and Packaging**

Superwool HT Thermo-Blocs are delivered packed on shrink wrapped pallets.

**Fixing Components and Installation**

Superwool HT Thermo-Blocs are normally supplied as 305mm square and of thicknesses ranging from 100mm to 300mm in 25mm increments.

Other sizes, shapes and densities, including L-shaped modules can be made available on request.

The standard side fixed studs and yokes are ASTM 304 SS but higher grades of steel are available for more arduous service conditions.

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.

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