

Superwool[®] Boards HT, HT2, HTLB, Strong, Carton - Europe

Product Data Sheet

Product Description

Superwool HT, HT2, HT LB, Strong and Carton 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.

These Superwool 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 these Superwool Boards. If wet by water, steam or oil, thermal and physical properties are restored upon drying.

Superwool HT, HT2, HT LB, Strong and Carton 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.

- Superwool HT2 Board, with a classification temperature of 1450°C (2642°F) offers record performances compared to the original formula because of its resistance to higher temperature, while maintaining a low thermal conductivity and good resistance to erosion
- Superwool Plus HTLB Board features a classification temperature of 1100°C (2012°F) that is flexible and offers good resistance and facilitate installation in which, rigid products are not suitable
- Superwool Plus Strong Board is a 1200°C (2192°F) classification temperature with a dense formulation
- Superwool Plus Carton Board is a thin, rigid board with a classification temperature of 1200° (2192°F) is produced with Superwool Plus fibres and both organic and inorganic binders

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
- Lightweight, low heat storage
- Easy to install

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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	Superwool HT Board	Superwool HT2 Board	Superwool HT LB Board	Superwool Plus Strong Board	Superwool Plus Carton Board
Colour	White/Tan	White / tan	-	White / tan	White / tan
Classification Temperature, °C (°F), ISO 10635	1300 (2372)	1450 (2642)	1100 (2012)	1200 (2192)	1200 (2192)
Density, kg/m³ (pcf), ASTM C612-14	350 (22)	335 (21)	250 (16)	380 (24)	290 (18)
Compressive Strength, 10% deformation, MPa (psi), ASTM C165	0.3 (43.5)	-	-	0.38 (55.1)	-
Permanent Linear Shrinkage, %, ISO 10635					
@ Classification Temperature	1.5	1.6	-	2	2
Modulus of Rupture, Unfired, MPa (psi), ASTM C165	1.4 (203)	-	-	2.01 (291)	1.47 (213)
Loss of Ignition, LOI, %					
after 2 hours heating @ 800°C (1472°F)	3	-	-	-	-
Chemical Analysis, %					
Alumina, Al ₂ O ₃	-	-	-	-	-
Silica, SiO ₂	78	-	-	-	-
Zirconia, ZrO ₂	-	-	-	-	-
Calcium oxide + Magnesium oxide, CaO + MgO	20	-	-	-	-
Other	2	-	-	-	-
Thermal Conductivity, W/m·K (BTU·in/hr·ft²), ASTM C201					
200°C (392°F)	0.06 (0.42)	-	0.03 (0.21)	-	-
400°C (752°F)	0.08 (0.56)	0.08 (0.56)	0.04 (0.28)	0.09 (0.62)	0.07 (0.49)
600°C (1112°F)	0.11 (0.76)	0.12 (0.83)	0.08 (0.56)	0.12 (0.83)	0.10 (0.69)
800°C (1472°F)	0.15 (1.04)	0.18 (1.25)	0.15 (1.04)	0.14 (0.97)	0.15 (1.04)
1000°C (1832°F)	0.2 (1.39)	0.25 (1.73)	0.24 (1.67)	0.17 (1.18)	-
1100°C (2012°F)	0.23 (1.60)	-	-	-	-
1200°C (2192°F)	0.29 (2.01)	0.33 (2.29)	0.29 (2.01)	-	-
1400°C (2552°F)	-	0.38 (2.64)	-	-	-

Product Availability

Superwool Plus Blok Boards 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.

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.