Data sheet

Superwool® Boards

ENGLISH

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Description

Rigid boards manufactured using Superwool® Plus™ and Superwool HT™ fibres, refractory fillers, organic and inorganic binders.

Type

Rigid boards and shapes from high temperature, low biopersistent insulation wools.

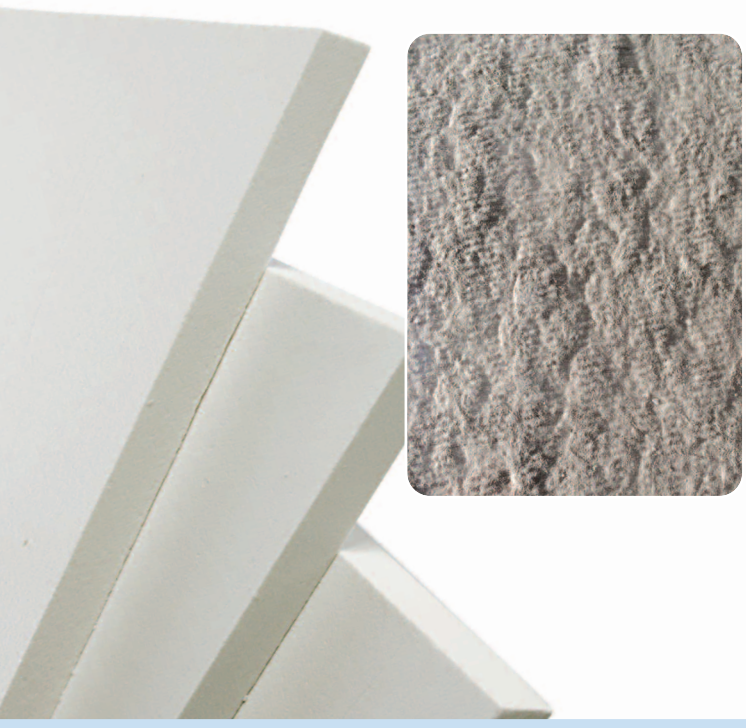
Classification temperature

From 900°C to 1300°C (1652°F to 2372°F)

The maximum continuous use temperature depends on the application. Unaffected by most chemicals except strong alkalis, phosphoric acid and molybdenum. For further advise please contact your local Morgan Advanced Materials representative.

Tolerances

- Less than 10mm: +/- 0.5mm
- From 10mm to 20mm: +/- 1mm
- From 25mm to 50mm: +/- 2mm
- More than 50mm: +/- 4mm



Grades available

Superwool® Plus™ Boards

Board 75 :
Suitable for all applications up to 900°C (1652°F).

H board :
Recommended when a high strength material is required.

Board 85 :
Suitable for all applications up to 1000°C (1832°F).

Board LTI :
Recommended for all applications where thin, rigid insulating panels are required.

Board INO :
Recommended for all applications where minimal smoke or fume emission is desirable.

Board Aluboard :
A thin aluminium foil is glued on the surface.

Superwool® HT™ Boards

Superwool® HT™ C Board :
Formula specially designed for application up to 1000°C (1832°F) requiring cycling resistance and high mechanical performances.

Superwool HT WB Board :
was especially developed for the higher operating temperature ranges of the Domestic Wall Hung Boiler Market.

Superwool® HT™ SB board :
was especially developed for the Domestic Floor-Mounted (Stand) Boiler Market.

Benefits

- Thin boards is easily die-cut and all boards can be cut with a hacksaw blade allowing precise shapes to be made.
- Good thermal shock resistance allows use in applications where large variations in temperature occur.
- Low heat storage capacity.
- Can be used in direct contact with flame.
- Very low thermal conductivity.
- Superwool® fibre meets the requirements specified under NOTE Q of European Regulation 1272/2008. All Superwool® fibre products are therefore exonerated from labelling requirements in Europe. No requirement for warning labels under Globally Harmonised System (GHS) for the classification and labelling of chemicals.

Data sheet

Superwool® Plus Board

Metric information

		Superwool Plus Board 75	Superwool Plus Board H	Superwool Plus Board 85	Superwool Plus Board LTI	Superwool Plus Board INO	Superwool Plus Board Aluboard
Classification temperature	°C	900	900	1000	1100	1100	600
Thickness range	mm	25 - 50	10 - 25	20 - 50	6 - 15	10 - 20	25
Colour		White/Tan	White/Tan	White/Tan	White/Tan	White/Tan	White/Tan
Density, kg/m³		320	520	320	350	500	320
Modules of rupture, MPa	*unfired	0.8	3.5	0.8	1.5	1.2	1.0
Compressive strength, MPa (ASTM C-165) @ 10% relative deformation		0.4	1.1	0.3	0.3	0.3	0.3
Water absorption after 2 hours	%	2.0	2.0	2.0	-	-	-
Loss of ignition after 2 hours	@800°C	5.0	10.0	5.0	5.0	5.0	5.5
Permanent linear shrinkage (ASTM C-165) Isothermal heating at class temperature		1.0	1.2	0.9	1.0	1.6	1.4
Thermal conductivity (ASTM C-201) **W/m•K**							
Mean temperature	@ 300°C	0.09	0.12	0.07	0.08	0.09	0.05
	@ 400°C	0.07	0.13	0.08	0.09	0.11	0.06
	@ 500°C	0.09	-	0.08	-	-	0.07
	@ 600°C	0.12	0.15	0.11	0.12	0.13	0.08
	@ 800°C	0.13	-	0.12	0.15	0.15	0.12
	@ 1000°C	-	-	0.16	-	-	-
Chemical composition (ISO 12677)	%						
	SiO_2	59.4	70.5	59.5	67.0	63.5	61.2
	Al_2O_3	15.1	11.2	10.1	4.4	10.6	13.9
	$Fe_2O_3+TiO_2$	3.8	1.6	1.2	0.6	1.5	3.0
	CaO+MgO	19.4	15.1	28.2	27.4	23.5	18.3
	Na_2O+K_2O	2.3	1.6	1.0	0.6	0.9	3.6

Tolerances

Superwool Plus Board H	**10 - 20 :**	Maxi +/-1	**25 :**	Maxi +/-2
Superwool Plus Board 85	**20 :**	Maxi +/-1	**25 - 50 :**	Maxi +/-2
Superwool Plus Board LTI	**6 - 9 :**	Maxi +/-0.5	**10 - 15 :**	Maxi +/-1
Superwool Plus Board INO	**10 - 20 :**	Maxi +/-1		
Superwool Plus Board Aluboard	**25 :**	Maxi +/-2		

Availability and Packaging

Standard Sizes 1200mm x 1000mm other dimensions available on request

Contact

Europe:
Telephone:
+44 (0) 151 334 4030

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marketing.tc@morganplc.com

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Data sheet

Superwool® HT Board

Metric information

		Superwool HT Board	Superwool HT C Board	Superwool HT WB Board	Superwool HT SB Board
Classification temperature	°C	1300	1150	1150	1150
Thickness range	mm	10 - 50	6 - 15	6 - 18	20 - 50
Colour		White/Tan	White/Tan	White/Tan	White/Tan
Density, kg/m³		360	480	480	380
Modules of rupture, MPa	*unfired	1.4	1.2	2.6	1.4
Compressive strength, MPa (ASTM C-165) @ 10% relative deformation		0.3	0.3	0.6	0.5
Loss of ignition after 2 hours	@800°C	3.0	5.5	5.5	5.5
Permanent linear shrinkage (ASTM C-165) Isothermal heating at class temperature		1.5	1.3	1.3	1.6
Thermal conductivity (ASTM C-201) **W/m•K**					
Mean temperature	@ 200°C	0.05	0.06	-	-
	@ 300°C	-	-	0.07	0.07
	@ 400°C	0.08	0.09	0.09	0.09
	@ 600°C	0.11	0.12	0.12	0.12
	@ 800°C	0.15	0.15	0.15	0.15
	@ 1000°C	0.20	-	-	-
	@ 1200°C	0.26	-	-	-
Chemical composition (ISO 12677)	%				
	SiO_2	77.5	73.0	73.0	71.9
	Al_2O_3	1.4	7.9	7.9	6.1
	$Fe_2O_3+TiO_2$	0.1	1.1	1.1	0.9
	CaO+MgO	20.3	16.8	16.8	20.0
	Na_2O+K_2O	0.7	1.2	1.2	1.1

Tolerances

Superwool Plus HT Board	**10 - 20 :**	Maxi +/-1	**25 - 50 :**	Maxi +/-2		
Superwool Plus HT C Board	**6 :**	Maxi +/-0.5	**10 - 20 :**	Maxi +/-1	**25 - 50 :**	Maxi +/-2
Superwool Plus HT WB Board	**6 - 8 :**	Maxi +/-0.5	**9 - 18 :**	Maxi +/-1		
Superwool Plus HT SB Board	**6 :**	Maxi +/-0.5	**10 - 20 :**	Maxi +/-1	**25 - 50 :**	Maxi +/-2

Availability and Packaging

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Data sheet

Superwool® Plus Board

Imperial information

		Superwool Plus Board 75	Superwool Plus Board H	Superwool Plus Board 85	Superwool Plus Board LTI	Superwool Plus Board INO	Superwool Plus Board Aluboard
Classification temperature	°C	900	900	1000	1100	1100	600
Thickness range	mm	25 - 50	10 - 25	20 - 50	6 - 15	10 - 20	25
Colour		White/Tan	White/Tan	White/Tan	White/Tan	White/Tan	White/Tan
Density, kg/m³		320	520	320	350	500	320
Modules of rupture, MPa	*unfired	0.8	3.5	0.8	1.5	1.2	1.0
Compressive strength, MPa (ASTM C-165) @ 10% relative deformation		0.4	1.1	0.3	0.3	0.3	0.3
Water absorption after 2 hours	%	2.0	2.0	2.0	-	-	-
Loss of ignition after 2 hours	@800°C	5.0	10.0	5.0	5.0	5.0	5.5
Permanent linear shrinkage (ASTM C-165) Isothermal heating at class temperature		1.0	1.2	0.9	1.0	1.6	1.4
Thermal conductivity (ASTM C-201) **W/m•K**							
Mean temperature	@ 300°C	0.09	0.12	0.07	0.08	0.09	0.05
	@ 400°C	0.07	0.13	0.08	0.09	0.11	0.06
	@ 500°C	0.09	-	0.08	-	-	0.07
	@ 600°C	0.12	0.15	0.11	0.12	0.13	0.08
	@ 800°C	0.13	-	0.12	0.15	0.15	0.12
	@ 1000°C	-	-	0.16	-	-	-
Chemical composition (ISO 12677)	%						
	SiO_2	59.4	70.5	59.5	67.0	63.5	61.2
	Al_2O_3	15.1	11.2	10.1	4.4	10.6	13.9
	$Fe_2O_3+TiO_2$	3.8	1.6	1.2	0.6	1.5	3.0
	CaO+MgO	19.4	15.1	28.2	27.4	23.5	18.3
	Na_2O+K_2O	2.3	1.6	1.0	0.6	0.9	3.6

Tolerances

Superwool Plus Board H	**10 - 20 :**	Maxi +/-1	**25 :**	Maxi +/-2
Superwool Plus Board 85	**20 :**	Maxi +/-1	**25 - 50 :**	Maxi +/-2
Superwool Plus Board LTI	**6 - 9 :**	Maxi +/-0.5	**10 - 15 :**	Maxi +/-1
Superwool Plus Board INO	**10 - 20 :**	Maxi +/-1		
Superwool Plus Board Aluboard	**25 :**	Maxi +/-2		

Availability and Packaging

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Superwool® HT Board

Imperial information

		Superwool HT Board	Superwool HT C Board	Superwool HT WB Board	Superwool HT SB Board
Classification temperature	°C	1300	1150	1150	1150
Thickness range	mm	10 - 50	6 - 15	6 - 18	20 - 50
Colour		White/Tan	White/Tan	White/Tan	White/Tan
Density, kg/m³		360	480	480	380
Modules of rupture, MPa	*unfired	1.4	1.2	2.6	1.4
Compressive strength, MPa (ASTM C-165) @ 10% relative deformation		0.3	0.3	0.6	0.5
Loss of ignition after 2 hours	@800°C	3.0	5.5	5.5	5.5
Permanent linear shrinkage (ASTM C-165) Isothermal heating at class temperature		1.5	1.3	1.3	1.6
Thermal conductivity (ASTM C-201) **W/m•K**					
Mean temperature	@ 200°C	0.05	0.06	-	-
	@ 300°C	-	-	0.07	0.07
	@ 400°C	0.08	0.09	0.09	0.09
	@ 600°C	0.11	0.12	0.12	0.12
	@ 800°C	0.15	0.15	0.15	0.15
	@ 1000°C	0.20	-	-	-
	@ 1200°C	0.26	-	-	-
Chemical composition (ISO 12677)	%				
	SiO_2	77.5	73.0	73.0	71.9
	Al_2O_3	1.4	7.9	7.9	6.1
	$Fe_2O_3+TiO_2$	0.1	1.1	1.1	0.9
	CaO+MgO	20.3	16.8	16.8	20.0
	Na_2O+K_2O	0.7	1.2	1.2	1.1

Tolerances

Superwool Plus HT Board	**10 - 20 :**	Maxi +/-1	**25 - 50 :**	Maxi +/-2		
Superwool Plus HT C Board	**6 :**	Maxi +/-0.5	**10 - 20 :**	Maxi +/-1	**25 - 50 :**	Maxi +/-2
Superwool Plus HT WB Board	**6 - 8 :**	Maxi +/-0.5	**9 - 18 :**	Maxi +/-1		
Superwool Plus HT SB Board	**6 :**	Maxi +/-0.5	**10 - 20 :**	Maxi +/-1	**25 - 50 :**	Maxi +/-2

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