Data sheet

Superwool® XTRA Unifelt™

Description

Superwool® XTRA Unifelt™ is made of low bio-persistent Superwool® XTRA fibres compositions with upgraded performances , bonded with an organic binder which begins to burn out on exposure to 180-200°C (356-392°F) and which imparts high strength prior to heating. It shows excellent flexibility properties which give good dimensional resilience after compression and make utilisation of the boards or cut pieces very easy where rigid products are unsuitable.

Superwool® XTRA Unifelt™ is supplied in a wide range of thickness combining light weight, high heat resistance, low thermal conductivity with high sound absorption properties.

Type

Vacuum formed felt manufactured from high temperature insulation wool.

Classification temperature

1450°C (EN 1094-1) 2600°F (ASTM C892-17)

The maximum continuous use temperature depends on the application, but under normal conditions this is 1300°C (2372°F) for Superwool® XTRA Unifelt™. Superwool® XTRA Unifelt™ is resistant to most chemicals except for boron and molybdenum at high levels.

For further advice please contact your local Thermal Ceramics partner.

Benefits

- Excellent thermal insulating performances
- Low heat storage
- Can be easily cut
- Exonerated from any carcinogenic classification under nota Q of directive 97/69EC, certificate available on request
- Does not form crystalline silica when exposed to high temperatures
- Excellent resistance to chemicals and pollutants, especially alkali metals
- High thermal coefficient of expansion to counteract shrinkage in operation
- Excellent thermal stability with time
- Immune to thermal shock
- High resistance to erosion when used in stack modules; no damage up to 50 m/sec at 1250°C (2282°F)
- Good resistance to tearing
- Flexible and resilient
- Resistant to water and steam
- Good sound absorption

Typical applications

- Sealing
- Ingot insulation
- Expansion gaskets
- Back-up insulation
- Veneering modules

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Product data

Physical properties		Superwool® XTRA Unifelt™
Classification temperature	°C (°F)	1450 (2600)
Melting point	°C (°F)	1650 (3000)
Typical properties		
Colour		White
Density	kg/m³ (pcf)	< 220 (< 14)
Modulus of Rupture, Mpa (psi)		Flexible
High temperature performance		
Loss of Ignition	%	8
Permanent linear shrinkage @1450°C **(EN 1094-1)** (2642°F) **(ASTM C892-17)** after 24 hours isothermal heating, %		< 3
Thermal conductivity W/m.K (BTU in/hr ft²°F) per ASTM C-201 at mean temperature of:		
	400°C (750°F)	0.08 (0.55)
	600°C (1112°F)	0.12 (0.83)
	800°C (1472°F)	0.18 (1.25)
	1000°C (1832°F)	0.25 (1.73)
	1200°C (2192°F)	0.34 (2.36)
	1300°C (2372°F)	0.39 (2.70)
Chemical composition, %		
	Al_2O_3	32 - 38
	SiO_2	27 - 33
	K_2O	23 - 28
	ZrO_2	5 - 9
	MgO	0.5 - 1.5
	Other oxides	< 0.5

Availability and packaging

The boards in standard size 1000 x 500mm are packed in cartons or shrink film wrapped pallets. Other sizes or die cut pieces can be made available upon request (subject to minimum order requirements).

Thickness mm	Quantity per box	Quantity per box
6	15	20
10	10	28
13	8	28
15	7	28
20	5	28
25	4	28
30	3	28
40	2	28
50	2	28

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