Unifelt™ Board

Datasheet Code 5-8-01 E

MSDS Code 104-9-EURO REACH

DESCRIPTION

Unifelt boards are made from refractory fibres compositions, bonded with an organic binder which begins to burn out on exposure to 180-200°C and which imparts high strength prior to heating. They show excellent flexibility properties which give good dimensional resilience after compression and make utilization of the boards or cut pieces very easy where rigid products are unsuitable.

Unifelt boards are supplied in a wide range of thickness and grades each combining light weight, high heat resistance, low thermal conductivity with high sound absorption properties.

Unifelt boards have excellent resistance to chemical attack, essentially unaffected by all chemicals except hydrofluoric and phosphoric acids and strong alkalis.

Also after being wet by oil or water, the thermal and physical properties are fully restored on drying.

TYPE

Vacuum formed Refractory Fibre Felt.

CLASSIFICATION TEMPERATURE

Unifelt 1300 1260°C
Unifelt 1400 1400°C
Unifelt 1500 1500°C
Unifelt 1600 1600°C
Unifelt 1700 1700°C

MAXIMUM USE TEMPERATURE

The maximum use temperature depends on the application. In case of doubt, refer to your local Morgan Thermal Ceramics distributor for advice.

ADVANTAGES

- Excellent insulating performance
- Flexibility, good resilience
- Unaffected by most chemicals except hydrofluoric and phosphoric acids and strong alkalis.
- Excellent thermal stability: fibres have good resistance to devitrification
- Low heat storage.
- Resistance to thermal shock.
- Good sound absorption.
- Can be easily cut

TYPICAL APPLICATIONS

- High temperature gaskets.
- Brickwork linings construction joints.
- Catalytic mufflers insulation.
- Die cut pieces for household appliance.
- Back up insulation for ladles.
- Veneering modules production

Morgan ThermalCeramics

Unifelt™ Board

Main properties

		Unifelt 1300	Unifelt 1400	Unifelt 1500	Unifelt 1600	Unifelt 1700
Classification temperature	°C	1260	1400	1500	1600	1700
Properties Measured at Ambient Conditions (23°C/50% RH)						
Colour		white	white	white	white	white
Density	kg/m^3	170	160	150	140	130
High Temperature Performance						
Permanent linear shrinkage (NF-B-40-452) after 24 hours isothermal heating at:						
1100°C	%	<2	-	-	-	-
1400°C	%	-	<2	<2	-	-
1500°C	%	-	-	-	<2	<2
Thermal conductivity at mean temperature of:						
200°C	W/m.K	0.075	-	-	-	-
400°C	W/m.K	0.11	0.11	0.10	0.10	0.10
600°C	W/m.K	0.15	0.14	0.14	0.13	0.13
800°C	W/m.K	0.22	0.21	0.20	0.18	0.18
1000°C	W/m.K	0.31	0.29	0.23	0.27	0.25
1200°C	W/m.K	-	0.39	0.38	0.37	0.35
1400°C	W/m.K	-	-	0.50	0.50	0.48
Chemical Composition						
Al_2O_3	%	47	52	56	62	70
SiO_2	%	53	48	44	38	30
$Fe_2O_3 + TiO_2$	%	<0.15	<0.15	<0.15	<0.15	<0.15
CaO + MgO	%	<0.1	<0.1	<0.1	<0.1	<0.1
$Na_2O + K_2O$	%	<0.1	<0.1	<0.1	<0.1	<0.1

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.

Morgan ThermalCeramics

Unifelt™ Board

Availability and Packaging
The boards in standard size 1000 x 500mm are packed in cartons or shrink film wrapped pallets.

Thickness mm	Quantity per box	Quantity per palette
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