

The MICROTHERM® PANEL range of products are custom made microporous insulation panels with very good thermal properties. The panels are produced in a glass cloth outer envelope, making them clean & easy to handle. The formulation is an opacified blend of filament reinforced pyrogenic silica (alumina for 1200 grade).

MICROTHERM® PANEL-1000X is a lightweight, custom made insulation panel.

MICROTHERM® PANEL-1000X HY is a custom made insulation panel with a hydrophobic core treatment to repel water. It is ideal for applications where contact with liquid water or condensation (dew point) is possible.

MICROTHERM® PANEL-1200 is an alumina based, custom made insulation panel which is capable of withstanding peak temperatures of 1200°C.

Typical applications

Microporous insulation offers an extremely low thermal conductivity, close to the lowest theoretically possible at high temperatures. Microporous materials are the preferred choice when a large temperature reduction is required within a limited space, or when strict heat loss or surface temperature requirements are specified.

- Back-up insulation in industrial furnaces
- Aluminium industry (launders, holding furnace, ...)
- Glass & ceramics industry
- Petrochemical industry (cracking furnace, hydrogen reformer, ...)
- Annealing & galvanizing lines
- Night storage heaters

Working & processing

MICROTHERM® Panel can be shaped easily with a simple cutter (the procedure can be found on our website).

The panels can be fixed in place with glue or by mechanical means such as anchors, pins and clips. They can also be fitted inside a frame concept, which is customer specific.

Properties & advantages

- Custom made
- Extremely low thermal conductivity
- High thermal stability
- Non combustible
- Clean & easy to handle
- Simple to cut & shape
- No harmful respirable fibres
- Environmentally friendly, free of organic binders
- Resistant to most chemicals
- Available in different temperature grades, including a hydrophobic version



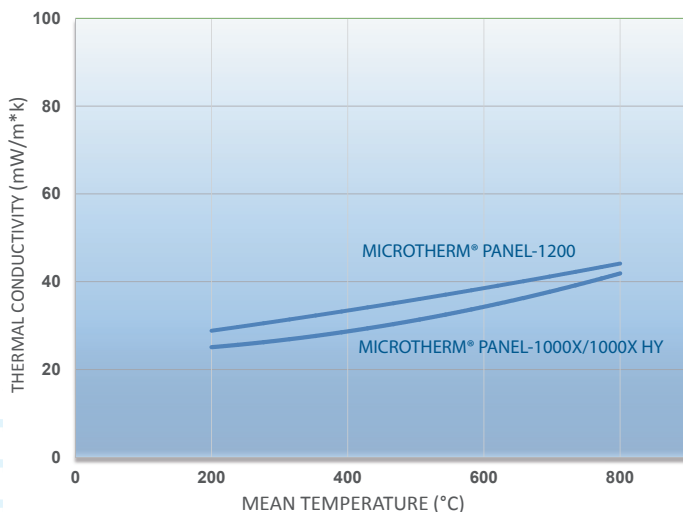


Technical data

Brand		MICROTHERM® PANEL			
Grade		1000X	1000X HY	1200	
Standard finishing		Glass cloth (E-Glass)*			
Classification temperature		°C	1000	1000	1200
Nominal density		kg/m ³	240	260	400
Compressive strength (ASTM C 165)		MPa = N/mm ²	0.13	0.12	0.36
Thermal conductivity (ISO 8302, ASTM C177)					
	200°C mean	W/m.K	0.025	0.025	0.029
	400°C mean	W/m.K	0.029	0.029	0.033
	600°C mean	W/m.K	0.034	0.034	0.039
	800°C mean	W/m.K	0.042	0.042	0.044
Specific heat capacity					
	200°C	kJ/kg.K	0.96	0.96	0.89
	400°C	kJ/kg.K	1.07	1.07	0.99
	600°C	kJ/kg.K	1.13	1.13	1.04
	800°C	kJ/kg.K	1.24	1.24	1.07
Shrinkage					
	Full soak 24h @1000°C	%	< 3	< 3	< 0.1
	Full soak 24h @1150°C		-	-	< 3

* Special coverings and coatings are available on request.

Thermal conductivity graph



Product dimensions & size availability

Standard stock size is 1220 x 610 however MICROTHERM® PANEL can be custom made according to customer specifications. Please contact your regional Promat agency to request your MICROTHERM® PANEL sizes.

The available thickness range depends on the material grade:

Brand	MICROTHERM® PANEL		
Grade	1000X	1000X HY	1200
Thickness range [mm]	3 - 50	3 - 40	3 - 45

Production tolerances

If length	≤ 1.6m	
Length [mm]	± 3	
Width [mm]	± 3	
Thickness [mm]	T ≤ 10	± 0.5
	10 < T ≤ 30	± 0.8
	30 < T ≤ 50	± 1.5

Note: Only valid for rectangular & square shapes

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Promat

MICROTHERM
THERMAL INSULATION SOLUTIONS

an **etex** company

MICROTHERM® PANEL