

The Microtherm PROMALIGHT® range of products are microporous insulation boards with very good thermal and mechanical properties. The formulation is an opacified blend of filament reinforced pyrogenic silica (alumina for 1200 grade).

**PROMALIGHT®-1000X** is a lightweight insulation board with silicon carbide as opacifier.

**PROMALIGHT®-1000R** has a similar thermal performance as PROMALIGHT®-1000X but contains no silicon carbide (often required in glass industry).

**PROMALIGHT®-1200** is an alumina based insulation board product at higher density and is capable of withstanding peak temperatures of 1200°C.

The PROMALIGHT® range of products is available in various coverings (PE foil & Aluminium). As an option, a reinforcement mica layer can be applied on both sides. This M-series increases the compressive strength by around 30% and improves handling.

### Properties & advantages

- Extremely low thermal conductivity
- High thermal stability
- Available in various temperature grades
- Non combustible
- Easy to handle
- Excellent machinability
- No harmful respirable fibres
- Environmentally friendly, free of organic binders
- Resistant to most chemicals

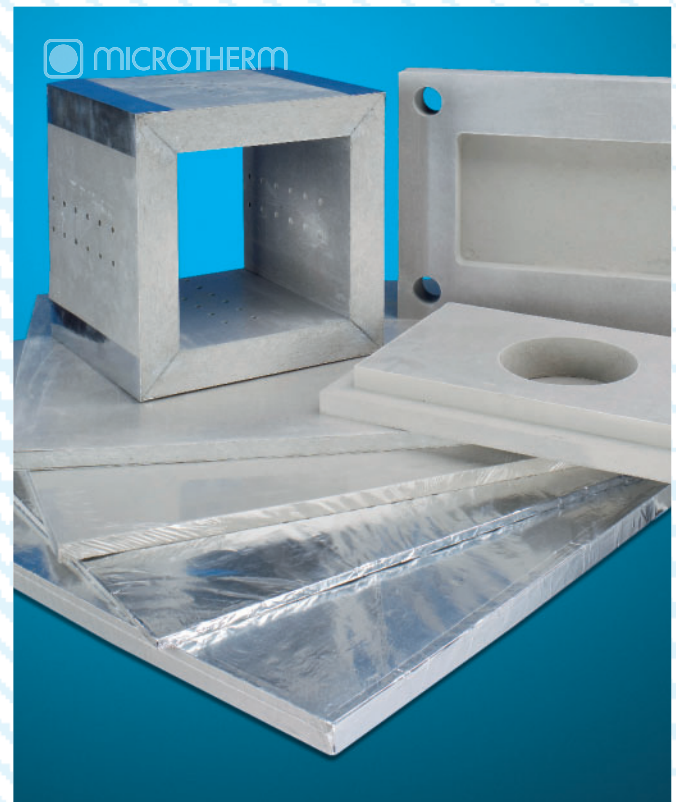
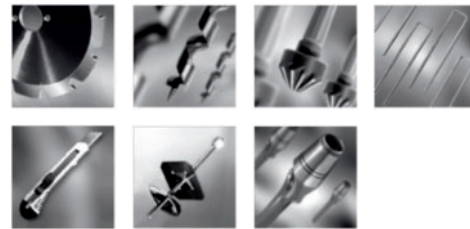
### Typical applications

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 & smelter furnace, ...)
- Glass & ceramics industry
- Petrochemical industry (cracking furnace, hydrogen reformer, ...)
- Fuel cells (SOFC)
- Thermal Batteries
- Data loggers (protection of electronic components)
- Black box & VDR (Voyage Data Recorder) for air, rail, and marine

### Working & processing

PROMALIGHT® boards can be shaped both manually and with stationary wood processing machinery. They can be cut, sawn, drilled and punched. The boards can be fixed in place with glue or by mechanical means such as anchors, pins and clips.



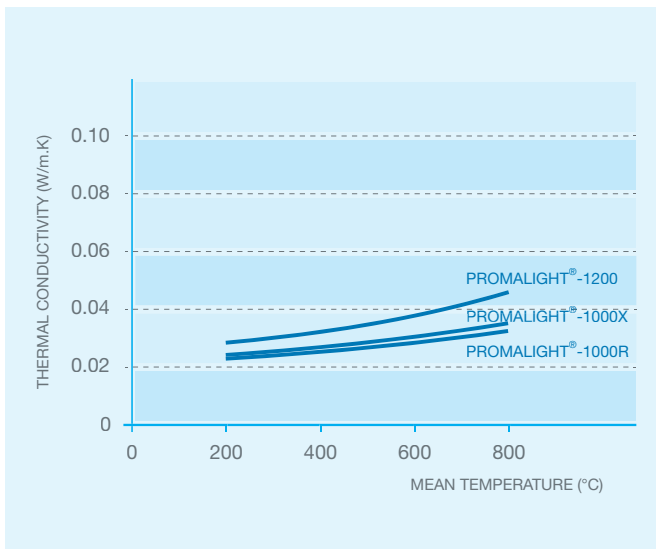


## Technical data

Brand		PROMALIGHT®			
Grade		1000X	1000R	1200	
Standard finishing*		Naked — PE foil — ALU (2 or 6 sides)			
Additional protection option		Mica			
Classification temperature	°C	1000	1000	1200	
Nominal density	kg/m <sup>3</sup>	280	320	450	
Compressive strength (ASTM C 165)	MPa = N/mm <sup>2</sup>	0.32 0.44	0.32 0.44	0.54 0.74	
Thermal conductivity (ISO 8302, ASTM C177)	with mica				
	200°C mean	W/m.K	0.023	0.022	0.029
	400°C mean	W/m.K	0.026	0.024	0.033
	600°C mean	W/m.K	0.030	0.029	0.039
	800°C mean	W/m.K	0.036	0.034	0.044
Specific heat capacity	200°C	kJ/kg.K	0.86	0.92	0.89
	400°C	kJ/kg.K	0.96	1.00	0.99
	600°C	kJ/kg.K	1.03	1.04	1.04
	800°C	kJ/kg.K	1.07	1.08	1.07
Shrinkage	1-sided 12h @1000°C	%	< 0.5	< 0.5	< 0.05
	Full soak 24h @1000°C		< 3	< 3	< 0.1
	Full soak 24h @1150°C		-	-	< 3

\* Coatings are available upon request

## Thermal conductivity graph



## Product dimensions & size availability

PROMALIGHT® boards are produced in standard sizes. Smaller sizes are also available on request. Please contact your regional Promat agency to request your PROMALIGHT® sizes.

	Length [mm]	Width [mm]	Thickness [mm]
PROMALIGHT®-1000X	1000	610	5 – 50
PROMALIGHT®-1000R	1000	550	20 – 50
PROMALIGHT®-1200	605	525	5 – 50

Additionally, even thinner boards are available upon request, down to 2mm. These products are then often referred to as thin sheet.

## Production tolerances

Length [mm]	± 3	
Width [mm]	± 3	
Thickness [mm]	T ≤ 30	± 1.0
	T > 30	± 1.5