

PROMALIGHT®



High temperature microporous insulation panel

The 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.

Technical data					
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 ³	280	320	450	
Compressive strength (ASTM C165)	MPa = N/mm ²	0.32	0.32	0.54	
	MPa = N/mm ²	0.44 (with mica)	0.44 (with mica)	0.74 (with mica)	
Thermal conductivity (ISO 8302, ASTM C177)	200 °C	W/m K	0.023	0.022	0.029
	400 °C	W/m K	0.026	0.024	0.033
	600 °C	W/m K	0.030	0.029	0.039
	800 °C	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.

Delivery sizes

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.

		-1000X	-1000R	-1200	
Length	mm	1000	1000	610	1000
Width	mm	610	550	500	610
Thickness	mm	10-50	20-50	10-25	30-40

Production tolerances

Length and width	mm	± 3			
Thickness	mm	T ≤ 30: ± 1.0			
	mm	T > 10: ± 1.5			

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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

Application areas

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.

HEAVY INDUSTRY

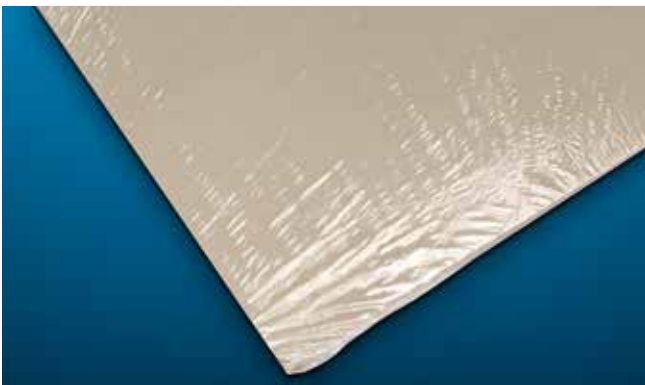
- back-up insulation in industrial furnaces
- aluminium industry (launders, holding and smelter furnace, ...)
- glass and ceramics industry

OIL AND GAS

- petrochemical industry (cracking furnace, hydrogen reformer, ...)

ENERGY

- fuel cells (SOFC)



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.

Dust is produced during processing. Dust can be harmful to health. Avoid contact with eyes and skin. Do not breathe in the dust. Dust should be removed by suction. The dust limits are to be adhered to. See product safety information sheet.

Thermal conductivity

