

PROMALIGHT®-1000X HD

High temperature microporous insulation board



The PROMALIGHT®-1000X HD is a microporous insulation board with very good thermal and mechanical properties. The formulation is an opacified blend of filament reinforced pyrogenic silica (alumina for 1200 grade).

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

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

Working & processing

PROMALIGHT®-1000X HD 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.

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

Technical data		
Brand	PROMALIGHT®	
Grade	1000X HD	
Finishing	Customer specific*	
Classification temperature	°C	1000
Nominal density	kg/m ³	> 300
Compressive strength (ASTM C165)	MPa = N/mm ²	0.41
Thermal conductivity (ISO 8302, ASTM C177)	@ 200 °C mean	0.023
	@ 400 °C mean	0.026
	@ 600 °C mean	0.030
	@ 800 °C mean	0.036
Specific heat capacity	@ 200 °C	0.86
	@ 400 °C	0.96
	@ 600 °C	1.03
	@ 800 °C	1.07
Shrinkage	1-sided 12h @ 1000 °C	< 0.5
	Full soak 24h @ 1000 °C	< 3
	Full soak 24h @ 1150 °C	-

*Various coatings and coverings are available upon request.

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 HD	1000	610	20-40

Additionally, even thinner boards are available upon request, down to 2 mm. 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