

PROMALIGHT® MACHINED PARTS are very accurately pre-machined microporous insulation components with very good thermal and mechanical properties. They are available with various coatings & coverings, for incorporation into demanding products and assemblies. The formulation is an opacified blend of filament reinforced pyrogenic silica (alumina for 1200 grade).

PROMALIGHT® MACHINED PARTS are 100% tailor made from selection of material grade right through to product finishing. They are based on the PROMALIGHT® product range.

Properties & advantages

- Custom made, precisely machined
- Extremely low thermal conductivity
- High thermal stability
- Available in different grades
- Available with various coatings & coverings
- Non combustible
- No harmful respirable fibres
- Environmentally friendly, free of organic binders
- Resistant to most chemicals

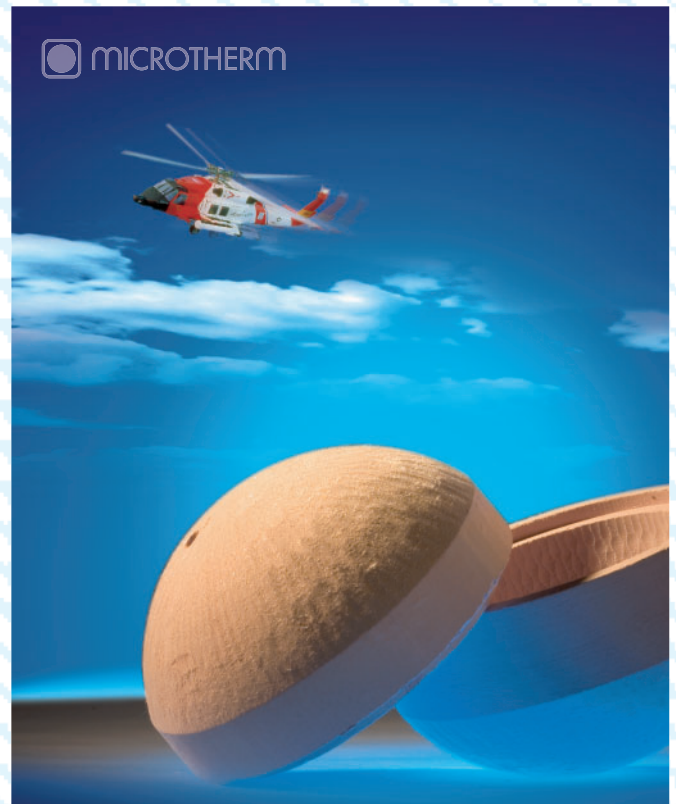
Typical applications

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.

- Compact, high temperature protection
- Data loggers (protection of electronic components)
- Black box & VDR (Voyage Data Recorder) for air, rail, and marine
- Fuel cells (SOFC) & reformers
- Thermal Batteries
- Complex assemblies

Working & processing

PROMALIGHT® MACHINED PARTS are 100% custom made. If some additional shaping would be required, this can either be done manually with hand tools, or using stationary wood or metal processing machinery. They can be cut, sawn, drilled and punched. The parts can be fixed in place with glue or by mechanical means such as anchors, pins and clips.



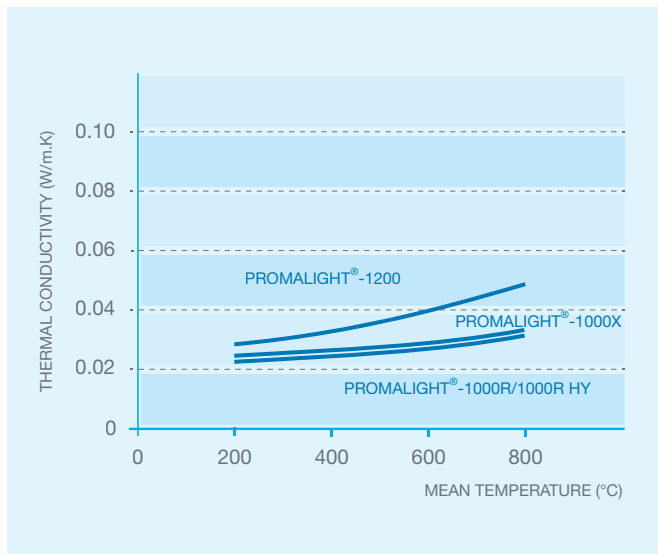


Technical data

Brand		PROMALIGHT®				
Grade		1000X	1000R	1000R HY	1200	
Finishing		Customer specific*				
Classification temperature	°C	1000	1000	1000	1200	
Nominal density	kg/m³	> 300	> 300	> 300	> 400	
Compressive strength (ASTM C 165)	MPa = N/mm²	0.41	0.32	0.32	0.54	
Thermal conductivity (ISO 8302, ASTM C177)	200°C mean	W/m.K	0.023	0.022	0.022	0.029
	400°C mean	W/m.K	0.026	0.024	0.024	0.033
	600°C mean	W/m.K	0.030	0.029	0.029	0.039
	800°C mean	W/m.K	0.036	0.034	0.034	0.044
Specific heat capacity	200°C	kJ/kg.K	0.86	0.92	0.92	0.89
	400°C	kJ/kg.K	0.96	1.00	1.00	0.99
	600°C	kJ/kg.K	1.03	1.04	1.04	1.04
	800°C	kJ/kg.K	1.07	1.08	1.08	1.07
Shrinkage	1-sided 12h @1000°C	%	< 0.5	< 0.5	< 0.5	< 0.05
	Full soak 24h @1000°C		< 3	< 3	< 3	< 0.1
	Full soak 24h @1150°C		-	-	-	< 3

* Various coatings & coverings are available upon request

Thermal conductivity graph



Product dimensions & size availability

PROMALIGHT® MACHINED PARTS are 100% tailor made. Size availability to be agreed with the customer in the engineering stage.

Production tolerances

PROMALIGHT® MACHINED PARTS are 100% tailor made, from grade to finishing. Production tolerances to be agreed with the customer in the engineering stage.