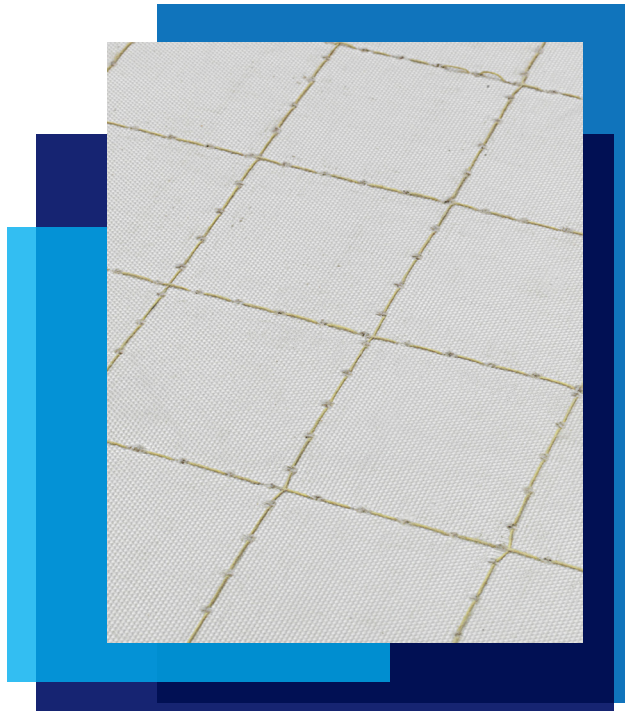


MICROTHERM® OVERSTITCHED

for Marine and Navy Applications

High temperature flexible microporous insulation panel



General description

The MICROTHERM® OVERSTITCHED and OVERSTITCHED HYB are custom made flexible microporous insulation panels with very good thermal properties and superior fire protection performance. The panels are produced in a glass cloth outer envelope, making them clean and easy to handle. MICROTHERM® OVERSTITCHED is stitched in 2 directions for flexing. The formulation is an opacified blend of filament reinforced pyrogenic silica.

MICROTHERM® OVERSTITCHED-1000R is a flexible, custom made insulation panel.

MICROTHERM® OVERSTITCHED-1000R HYB is a flexible, custom made insulation panel with a hydrophobic core treatment to repel water. It is ideal for applications where contact with liquid water or contaminated water is possible. Besides the glass cloth covering, it also is faced with an aluminized polyester barrier film. This film provides an additional resistance to fluids common in marine bilge water.

US NAVY APPROVALS

- Formerly qualified as MICROTHERM® Super G now called 1000R (Identical Product)
- Approved for N30 class fire protection on steel and aluminum decks and bulkheads
- Microtherm Overstitched 1000R HYB - Full approval by US Navy for N-30 class fire protection in bilge and wet areas

TECHNICAL DATA

MICROTHERM® OVERSTITCHED			
Grade		-1000R	-1000R HYB
Standard finishing		E-Glass Cloth (HYB + AL Polyester)	
Stitching pitch size OVERSTITCHED: Two-directional	in (mm)	2x2 (50x50)	
Classification temperature	°F (°C)	1,832 (1,000)	1,832 (1,000)
Nominal density	PCF (kg/m ³)	13.4-15.0 (215-240)	13.4-15.0 (215-240)
Compressive strength (ASTM C165)	PSI (Mpa=N/mm ²)	14.5 (0.10)	14.5 (0.10)
Thermal conductivity (ISO 8302, ASTM C177) 392°F / 200°C 752°F / 400°C 1,112°F / 600°C 1,472°F / 800°C	Btu-in/(hr-ft ² -°F) (W/m-K)	0.18 (0.026) 0.21 (0.030) 0.26 (0.038) 0.34 (0.049)	0.18 (0.026) 0.21 (0.030) 0.26 (0.038) 0.34 (0.049)
Specific heat capacity 392°F / 200°C 752°F / 400°C 1,112°F / 600°C 1,472°F / 800°C	Btu/(lb-°F) (kJ/kg-K)	0.22 (0.92) 0.24 (1.00) 0.25 (1.04) 0.26 (1.08)	0.22 (0.92) 0.24 (1.00) 0.25 (1.04) 0.26 (1.08)
Shrinkage Full soak 24h - 1832°F / 1000°C	%	< 3	< 3
Approvals - US Navy N-30 Steel Deck / Restricted Bulkhead Steel Unrestricted Bulkhead Aluminum Deck / Restricted Bulkhead Aluminum Unrestricted Bulkhead Aluminum Deck / Restricted Bulkhead	Areal weight (lbs/sf) 1.04 ¹ 1.16 ¹ 1.24 ² 2.56 ² 1.48 ²	Thickness 2 x 8mm 1 x 8mm ea side 2 x 10.5mm 2 x 10.5mm ea side	Thickness 2 x 10.5mm

¹ Facing Fiberglass "Navy Cloth"

² Facing Aluminized Polyester

DELIVERY SIZES

Standard size for North America is 1200 x 600 (47.24" x 23.62") but available in custom sizes. Please contact your regional Promat agency to request your MICROTHERM® OVERSTITCHED sizes.

PRODUCTION TOLERANCES

Length and width	in (mm)	± 1/8 (3)
Thickness	in (mm)	± 1/50 (0.5)

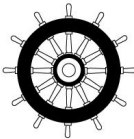
Properties & advantages

- IMO / U.S. Coast Guard non-combustible certified
- Custom made & flexible
- Allows thinner walls/bulkheads
- Extremely low thermal conductivity
- Lightweight fire resistant
- Shock & vibration resistant
- Simple to cut, shape, & install
- No harmful respirable fibers
- Environmentally friendly, free of organic binders

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 To meet marine structural fire protection requirements.

- Piping insulation
- Hot pipe support insulation
- Exhaust systems
- Material for removable blankets, cassettes and heat shields
- Structural fire protection for steel and aluminum vessels



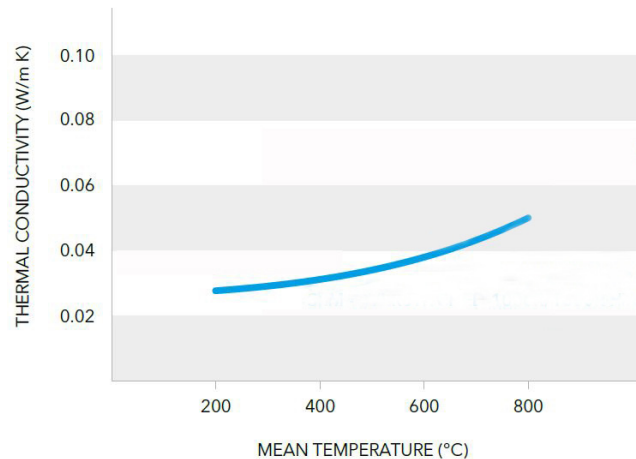
Working & processing

MICROTHERM® OVERSTITCHED -1000R and -1000R HYB can be shaped easily with a simple utility knife.

The panels can be fixed in place with glue or by mechanical means such as anchors, pins and clips. For piping applications, the panels are installed with wire and straps, identical to conventional insulation materials.

Produced in Belgium and the U.S.A.

Thermal conductivity



All specified technical data are mean values from the production which are subject to the usual fluctuations and do not represent guaranteed properties in the sense of a guarantee. All information corresponds to the current state of the art and has been presented and described to the best of our knowledge. Changes due to new findings are possible, errors and misprints are not excluded. With regard to any liability, our delivery and payment terms apply exclusively. Request safety datasheet. With the publication of this edition, all previously published datasheets are invalid. © Copyright Etex NV, Brussels, Belgium. All rights reserved. 2021-05

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