

# MICROTHERM® FLOPPY



### Flexible microporous insulation for pipelines

MICROTHERM® FLOPPY is a flexible, low density microporous insulation panel with an elasticated outer envelope. It is clean, easy to handle and fast to install. The formulation is an opacified blend of filament reinforced pyrogenic silica.

MICROTHERM® FLOPPY panels are custom made and offer great thermal performance in pipe-in-pipe insulation systems.

### Technical data

Finishing		Elasticated non-woven fabric
Classification temperature	°C	1000
Nominal density	kg/m <sup>3</sup>	250
Compressive strength (ASTM C165)	MPa = N/mm <sup>2</sup>	0.11
<b>Thermal conductivity (ISO 8302, ASTM C177)</b>		
200 °C	W/m K	0.023
400 °C	W/m K	0.026
600 °C	W/m K	0.031
800 °C	W/m K	0.039
<b>Specific heat capacity</b>		
200 °C	kJ/kg K	0.92
400 °C	kJ/kg K	1.00
600 °C	kJ/kg K	1.04
800 °C	kJ/kg K	1.08
<b>Shrinkage</b>		
1-sided 12h - 1000 °C	%	< 0.5
Full soak 24h - 1000 °C	%	< 6

### Delivery sizes

MICROTHERM® FLOPPY is custom made according to customer specifications. Please contact your regional Promat agency to request your MICROTHERM® FLOPPY panel sizes. The thickness range varies from 5 mm up to 40 mm.

### Product tolerances

Length	mm	± 8
Width	mm	± 10
Thickness	mm	T ≤ 10: ± 0.5
	mm	10 < T ≤ 30: ± 0.8
	mm	T > 30: ± 1.5

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### Properties & advantages

- custom made and flexible
- extremely low thermal conductivity
- homogeneous thermal performance - unaffected by thermal variations
- non-combustible
- clean and easy to install
- 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.

### OIL AND GAS

- onshore pipelines
- subsea production flowlines
- subsea cryogenic pipelines (LNG/LPG)
- risers

### Working & processing

MICROTHERM<sup>®</sup> FLOPPY is 100% custom made. If some cutting would be required, shaping can be done easily with a simple cutter (the procedure can be found on our website). The panels can be fixed in place with glue or by mechanical means.

### Thermal conductivity

