

PROMASIL®-1000, -1000P, -1100



High performance calcium silicates

PROMASIL®-1000, -1000P and -1100 are lightweight calcium silicate insulating boards.

In combination with dense and light-weight refractory bricks or concrete, they are the ideal back-up lining. Due to the low thermal shock resistance the boards are not suitable for front sided use.

PROMASIL® materials are produced as boards, pipe sections, segments and cut sections.

Technical data

Grade		-1000	-1000P	-1100
Colour		white	white	white
Classification temperature	°C	1000	1000	1100
Bulk density	kg/m ³	245	285	285
Cold compressive strength	N/mm ²	> 1.5	> 2	> 2.5
Linear Shrinkage				
1000 °C - 12h	%	1.3	1.3	-
1050 °C - 12h	%	-	-	< 2
Thermal conductivity				
200 °C	W/m K	0.075	0.085	0.085
400 °C	W/m K	0.105	0.105	0.105
600 °C	W/m K	0.145	0.145	0.145
800 °C	W/m K	0.175	0.185	0.185
Specific heat capacity	kJ/kg K	1.03	1.03	1.05
Reversible thermal expansion	K ⁻¹	5.4x10 ⁻⁶	5.4x10 ⁻⁶	5.5x10 ⁻⁶
Protective gas-resistance		CO, NH ₃ , H ₂ , CH ₄ , N ₂ atmosphere		
Moisture content (air-dry)	%	ca. 3-5		

Delivery sizes

Length	mm	1000
Width	mm	500
Thickness	mm	25 / 30 / 40 / 50 / 60 / 65 / 70 / 75 / 80 / 90 / 100

Segments in all diameters can be produced on request. Shaped parts and cut sections are available on request.

PROMASIL®-1000 pipe sections

Inner diameter (min.)	mm	10
Outer diameter (max.)	mm	330
Pipe length	mm	500

Production tolerances

Length and width	mm	± 1.5
Thickness	mm	± 1.3

PROMASIL®-1000, -1000P, -1100

Properties & advantages

- low thermal conductivity
- low shrinkage
- low bulk density, low heat storage
- good mechanical strength
- qualified for use on austenitic steel (ASTM 795)
- resistant to reduction gases CO, NH₃, H₂ and CH₄
- free of sulphur, low iron
- good workability
- flexible size format, thickness up to 170 mm
- shaped parts available including pipe sections and segments
- product quality meets the ASTM and EN standards (CE mark)
- low assembly costs
- water repellent surface treatments
- chemical resistance improvement

Application areas

PROMASIL® materials are used in various industrial applications as thermal back-up insulation in a refractory lining.

HEAVY INDUSTRY

- **Aluminium industry:** anode baking furnace and electrolysis cells
- **Steel industry:** smelting and heat treatment furnaces
- **Glass industry:** melting furnaces, heat treatment and fuming furnaces
- **Ceramics industry:** bogie hearth furnaces, kiln cars
- **Cement industry:** heat exchangers and cyclone separators

OIL AND GAS INDUSTRY

- fired heaters
- pipe insulation, pipe support (suitable according to ASTM 1617 and 795)



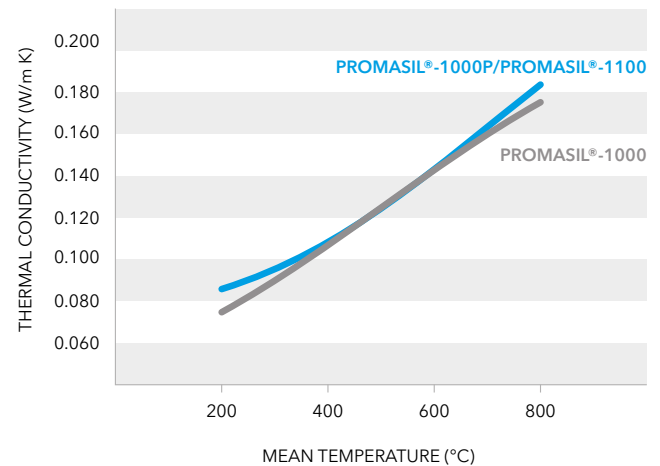
Working & processing

This PROMASIL® range of products can be easily worked and machined with woodworking tools.

To avoid water absorption and to protect against aggressive atmospheres, Promat®-Impregnations are available.

When cutting to size, the maximum workplace concentration values for inhalable dust must be observed. Dust extraction is recommended. See product safety information sheet.

Thermal conductivity



All data contained in this publication are provided in good faith and are correct at the time of printing. Data are representative of production and are subject to normal production fluctuations, they should not be deemed to constitute or imply any warranty of performance, the user is held responsible for determining the suitability of the products for the given application. Errors and omissions excepted. All drawings and representations remain our exclusive property and cannot be used, totally or in part, without our prior written approval. Excerpts, reproductions, copies, etc. of our publications require our prior approval. This publication renders all previous ones invalid. Our terms of delivery and payment apply in the event of any claim. Promat and Microtherm are registered trademarks. © Copyright Etex NV, Brussels, Belgium. All rights reserved. 2017-09

Etex Industry c/o Microtherm N.V., Industriepark-Noord 1, 9100 Sint-Niklaas, Belgium | T +32 (0)3 760 19 80 | F +32 (0)3 760 19 99
info@promat-industry.com | www.promat-industry.com