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 | 1050 |
| Bulk density | kg/m³ | 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 |
| 000 °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) | % | са. 3-8 | | |

| Delivery sizes | | |
|----------------|----|---|
| Length* | mm | 1000 |
| Width* | mm | 500 |
| Thickness* | mm | 25 / 30 / 40 / 50 / 60 / 65 / 70 / 75 / 80 / 90 / 100 |

* Other sizes are available on request. Maximum: 2500mm x 1000mm, up to 150mm thickness.

Segments in all diameters, shaped parts and cut sections are available on request. Shaped parts and cut sections are available on request.

| Production tolerances | | |
|-----------------------|----|-----|
| Length and width | mm | ± 2 |
| Thickness | mm | ± 1 |

| PROMASIL®-1000 pipe sections | | | | |
|------------------------------|----|-----|--|--|
| Inner diameter (min.) | mm | 10 | | |
| Outer diameter (max.) | mm | 330 | | |
| Pipe length | mm | 500 | | |



PROMASIL®-1000, -1000P, -1100

Properties & advantages

- low thermal conductivity
- low shrinkage
- low bulk density, low heat storage
- good mechanical strength
- excellent resistance to corrosion under insulation (according to ASTM C795 and ASTM C1617)
- resisitant to reduction gases CO, NH₂, H₂ and CH₄
- free of sulphur, low iron
- good workability
- flexible size format, thickness up to 150 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
- antidust treatment
- 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 foming 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)

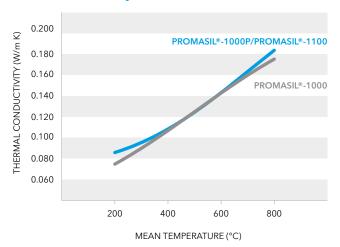
Working & processing

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

To avoid water absorbtion 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





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