

REFIAL[®]-MPI Board

Rigid Microporous Insulation

REFIAL[®] -MPI Board is a rigid, high integrity microporous board, offering superior insulation properties combined with good handleability.

Produced from an opacified blend of pyrogenic silica with a filament reinforcement, this board is available in a 1000, 1100 grade. in a raw sate (i.e. no encapsulation) and are available with different coverings : Aluminium Foil (2/6 sides), E-Class Fibre Cloth and Glass Fibre fleece

Features and Benefits

- Extremely low thermal conductivity over a wide temperature range
- High thermal stability
- Low shrinkage
- Low in weight
- Wide range of sizes available to order
- Alternative grades available to suit the application
- Inorganic and non-combustible
- Simple to handle, cut, and shape
- No harmful respirable fibres
- Environmentally friendly
- Resistant to most chemicals

Cutting and Fixing

REFIAL[®] -MPI Board can be cut and shaped with conventional woodworking hand tools and machinery and fixed as with other similar insulation materials using glue, retaining pins or anchors.

Typical Applications

For use as back up insulation in:

- Steel forging furnaces, reheating furnaces, soaking pit covers
- Oil and Gas (crackers, distillation units, reformers)
- Aluminium pyrolysis cells, holding furnaces, remelters and launder metal transfer systems
- All types of kilns (roller, tunnel, shuttle) Kiln Cars
- Glass melting furnaces, regenerators, refiners, forehearths

Fuel cells :

- In and around BOP and Stack in SOFC

Data Loggers

- Used to protect and control temperature inside the device, data logger, monitor, portable measurement instruments, temperature recorders



Technical Data

Classification temperature (1)		1000°C	1100°C
Long-time exposure		950°C	1050°C
Nominal Density		280 kg/m ³	300 kg/m ³
Compressive Strength at 10% deformation		0,33 MPa	0,67 MPa
Thermal Conductivity at	200°C	0,022 W/m K	0,028 W/m K
	400°C	0,023 W/m K	0,029 W/m K
	600°C	0,027 W/m K	0,032 W/m K
	800°C	0,034 W/m K	0,037 W/m K
Specific Heat Capacity at	200°C	0,86 KJ/kg K	0,93 KJ/kg K
	400°C	0,94 KJ/kg K	0,96 KJ/kg K
	600°C	0,96 KJ/kg K	1,02 KJ/kg K
	800°C	0,99 KJ/kg K	1,07 KJ/kg K
Linear Shrinkage; 24h full soak at 950°C		≤ 2,5 %	≤ 0,5 %
24h full soak at 1050°C		-	≤ 2,5 %

(1) Classification Temperature is not a definition of the operational limit of these products, especially when long term physical or dimensional stability is a factor. For certain applications operational temperature limits may be significantly reduced. For assistance or clarification please contact REFALTEC office. info@refraltec.com

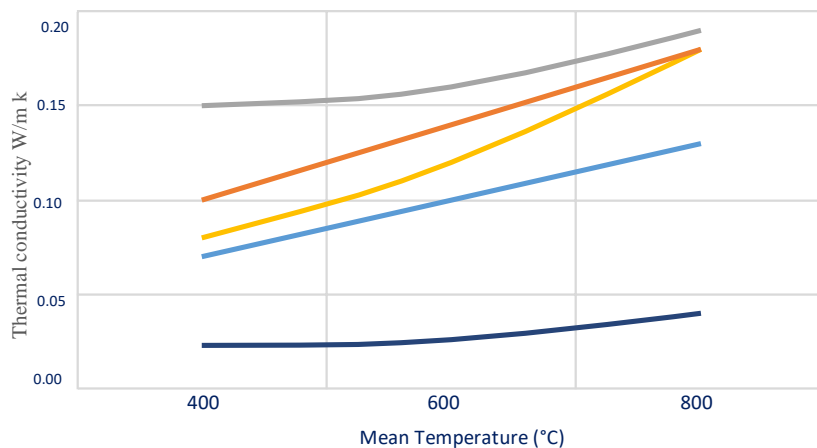
Dimension & Size Availability*

Product Type	Length & Width (mm)	Thickness (mm)
REFIAL®-MPI BOARD	1000*600(±3)	10-50(±1)
Coverings Available	Raw / Alu-Foil / Thin Glass fleece / PE Film / E-Class Fibre Cloth	

* Other sizes available upon request

REFIAL® - MPI products reacts sensitively towards all wet materials such as water, oil, gasoline etc., as these materials destroy its pore structure). Therefore , special coverings and Hydrophobic grade are available, which makes the material insensitive to water and humidity (up to 300°C).

Thermal Conductivity at Mean Temperature



REFIAL®-MPI products offer a realistic alternative to other lightweight insulations

REFIAL®-MPI products offer a realistic alternative compared to other lightweight insulation solutions, such as low density calcium silicate, vermiculite, fibre or wool based blankets and boards.

The thermal resistance provided by REFIAL®-MPI products is a cost competitive alternative to the other lightweight insulation solutions on the market, whilst also delivering benefits in terms of space optimization and reduced weight.



— Vermiculite 350 kg/m ³	— AES Fibre Blanket 128 kg/m ³
— Calcium silicate boards 260 kg	— AES Fibre Board 320 kg/m ³
— REFIAL-MPI 1000	

REFIAL® contains the right to change without notice the properties and values of all products. The given technical values are obtained in specific conditions and are average and indicative. Data is 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. In case of any doubt if these properties and/or values are matching the application requirements, please contact REFIAL® for advice.