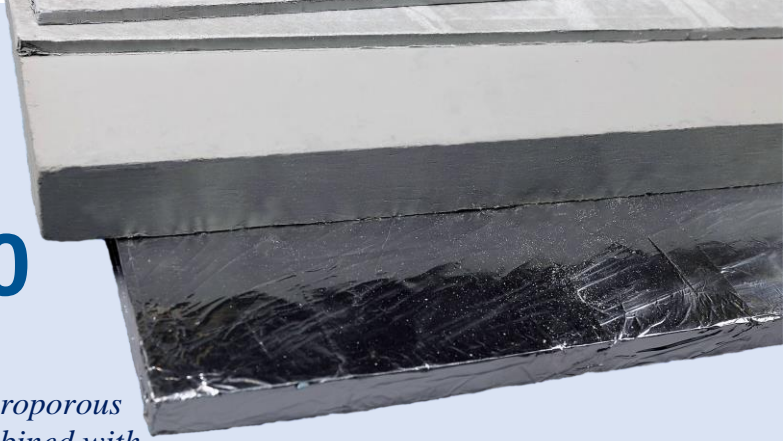


REFIAL®-MB 1000

Rigid Microporous Insulation

REFIAL® -MB1000 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 with different coverings : Aluminium Foil (2/6 sides), E-Class Fibre Cloth and Glass Fibre fleece

REFIAL®-MB 1000 are also available with higher mechanical strength for CNC machining and in hydrophobic version .

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®-MB 1000 can be shaped both manually with hand tools and with stationary wood processing machinery . The boards can be cut , sawn, drilled and punched. The boards can be installed with glue or by metal anchors, pins and clips.

Typical Applications

- Back-up insulation in industrial furnaces.
- Due to the best available insulation effectiveness, the useable volume will be increased and the energy loss considerable reduced. In comparison with furnaces which are insulated with fire light bricks, the energy loss can thoroughly be divided into half by using **REFIAL -MB 1000** . Even in comparison with a fiber's insulated furnace, the energy loss can be significantly reduced by using **REFIAL -MB 1000** in the backup insulation.
- **REFIAL -MB 1000** is in use in all metal processing industries, especially in the Aluminium- and Steel industry as a backup insulation in crucibles/steel ladles, holding & smelter furnace , launders , ...
- Glass & ceramics industry
- Petrochemical industry (cracking furnace, hydrogen reformer,)
- Fuel cells
- Batteries
- Data loggers (protection of electronic components)
- Black box & VDR (Voyage Data Recorder) for air, rail, and marine



Technical Data

Maximum temperature	1050°C
Recommended Temperature of use	1000°C
Colour	Grey/beige
Covering	Aluminium foil, glass fleece, PE foil
Bulk Density ± 10%	270-320 kg/m ³
Compressive strength at 10% (ASTM C 165)	>0,32 MPa
Bending strength	0,16 N/mm ²
Shrinkage(ISO2477) one side 12h at 1000°C At all sides 24h at 1000°C	< 0,5% <3%
Fire classification according DIN 4102	Class A1 - non-combustible
Specific Heat Capacity at 200°C 400°C 600°C 800°C	0,92 KJ/kg.K 1,00 KJ/kg.K 1,04 KJ/kg.K 1,08 KJ/kg.K
Thermal Conductivity (ISO 8302,ASTM C177) 200°C 400°C 600°C 800°C	0,024 W/mK 0,025 W/mK 0,028 W/mk 0,032 W/mK
Storage instruction	Can be stored without shelf life limitation . The material has to be stored in dry conditions.

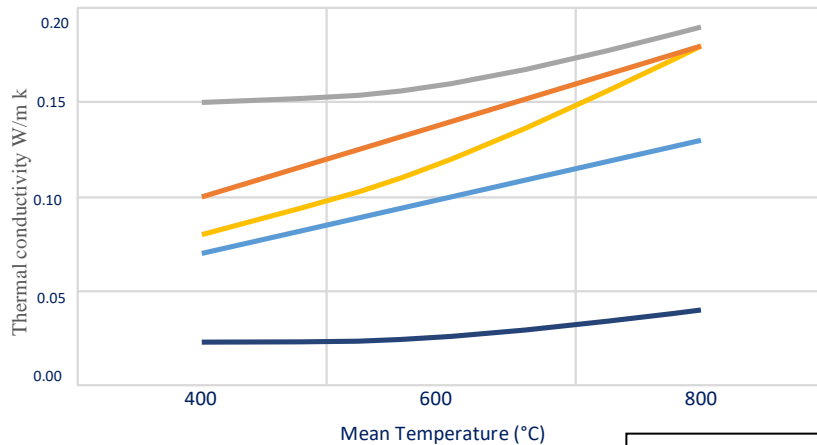
Dimension & Size Availability*

Product Type	Length & Width (mm)	Thickness (mm)
REFIAL®-MB 1000	700*1100	7-10-15-20-25-30-50
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.



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.

— 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	