

MONALITE® materials are asbestos fibre free “technical ceramics” made from calcium silicate in a density range from 850 to 1000 kg/m³.

MONALITE® is the standard product for use in aluminum casting and the foundry industry and is also used in the furnace industry and other process industries.

MONALITE® -M1 is the standard product for contact with molten metals up to 850 °C with low shrinkage.

MONALITE® -M1A is an improved version with higher strength and dimensional stability up to 1000 °C.

Properties & advantages

- Low thermal conductivity leading to low energy insulation systems
- Low thermal capacity
- Extremely high thermal shock resistance and fracture toughness leading to long life
- Non wetted by liquid non-ferrous metals, non reactive to lubricants such as boron nitride or graphite
- Asbestos free
- Dimensionally stable and wear resistant
- Excellent machinability to close tolerances

Typical applications

Non-ferrous metals

The non wetting properties of MONALITE® mean that these products are ideally suited for use in non-ferrous casting applications.

- Billet and ingot casting as transition plates, floats, spouts
- Head boxes for continuous casters
- Tips for continuous sheet casters
- Sprue bushes, tubes, nozzles and feeder box liner in low pressure die casting
- Hotface linings for dosing/holding furnaces
- Launderers and dams

When used in conjunction with PROMASIL® or PROMALIGHT®/MICROTHERM® range of high performance insulation, heat loss, casing temperature and weight can be reduced.

Furnace industry

- Load bearing housings
- Structural insulation where high thermal and/or mechanical load is required

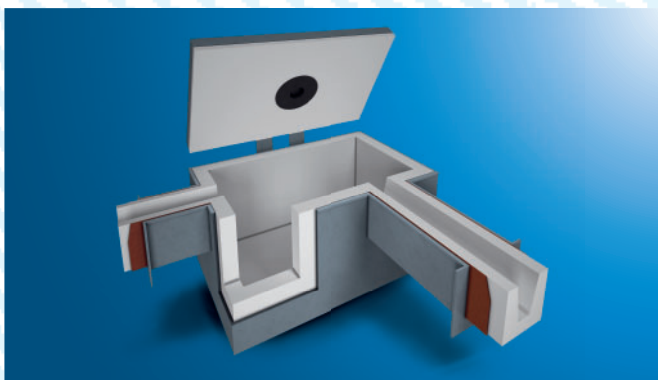
Oil & gas industry

- Collars, gaskets and pipe support rings
- Spacers and bushes

Working & processing

The homogeneous, fine pored structure is ideal for clean, precision machining. MONALITE® materials can be shaped easily with wood or metal processing machinery using special tools. When cut to size, the maximum allowable workplace concentration for dust generation must be observed. In general, dust extraction is recommended.

MONALITE® boards or cut sizes can be fixed in place with glue or by mechanical means such as screws or anchors.

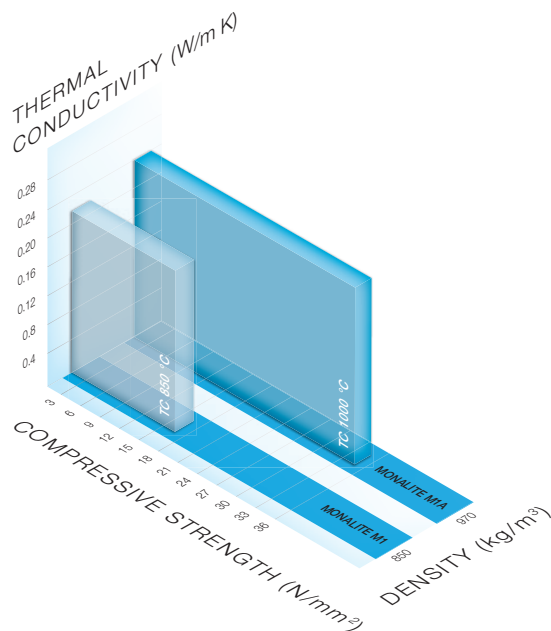




Technical data

Brand		MONALITE®		
Grade		-M1	-M1A	
Colour		White		
Classification temperature	°C	850	1000	
Bulk density	kg/m ³	850	970	
Cold compressive strength	N/mm ²	17	35	
Bending strength	N/mm ²	8	10	
Shrinkage @ 750 °C, 12 h	%	0.1	0.02	
Thermal conductivity	200 °C	W/m K	0.20	0.21
	400 °C	W/m K	0.21	0.23
	600 °C	W/m K	0.22	0.24
	800 °C	W/m K	0.23	0.25
Specific heat capacity	kJ/kg K	0.96	0.97	
Reversible thermal expansion	m/m K	6.1x10 ⁻⁶	6.2x10 ⁻⁶	
Alkalinity	pH-value	7-10	7-10	
Chemical analysis	CaO	%	38-43	38-43
	SiO ₂		50-55	50-55
	Al ₂ O ₃		<0.3	<0.3
	Fe ₂ O ₃		<0.3	<0.3
	LOI		2-4	2-4

Graph: Thermal conductivity vs. compressive strength vs. density (Thermal conductivity @ 600 °C)



Product dimensions & standard sizes

Length [mm]	Width [mm]	Thickness [mm]
1500/3000	1220	12.7
1500/3000	1220	19.1
1500/3000	1220	25.4
1500/3000	1220	38.1
1500/3000	1220	50.8
1500/3000	1220	76.2
1450	1200	101.6

Other sizes are available on request

Production tolerances

Length [mm]	± 5.0
Width [mm]	± 5.0
Thickness [mm]	+0/-0.8