

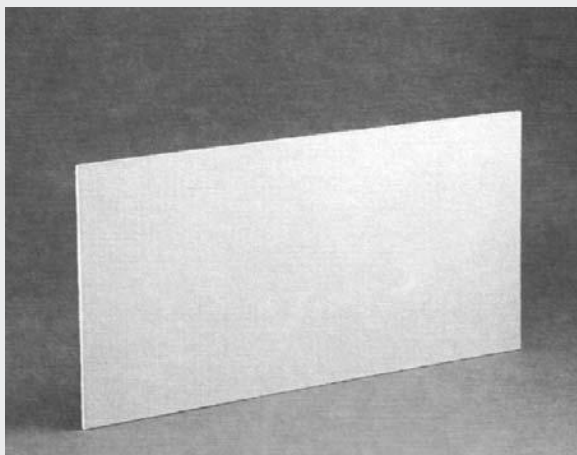
Kaowool™ Board



Datasheet Code 5-7-22 E

MSDS Code 104-9-EURO REACH

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TYPE

Vacuum formed boards.

CLASSIFICATION TEMPERATURE:

From 1260°C up to 1600°C, depending on grade.

MAXIMUM USE TEMPERATURE

The maximum use temperature depends on the application. In case of doubt, refer to your local Morgan Thermal Ceramics distributor for advice.

ADVANTAGES

- Rigid, self supporting boards.
- Low thermal conductivity.
- Good abrasion resistance.
- Low heat storage.
- Resistant to thermal shock.
- Not wetted by most molten non ferrous metals, including aluminium.
- Good resistance to spalling.
- Can be easily cut and shaped.

DESCRIPTION

Kaowool™ 1260, Strong, 1400, 1600 and 1600S Boards are produced from refractory fibre compositions specially developed to give rigid, self-supporting boards with excellent high temperature properties.

Board is designed for use in applications requiring higher rigidity than blanket forms, and, as a result of its higher density, has improved thermal insulation properties and abrasion resistance.

Kaowool boards are obtained by vacuum forming process. The process allows the production of white boards in a wide dimensional choice, with an excellent homogeneity throughout the thickness which ease machining of the boards when needed. For a large need of standard ceramic fibre boards, please refer to our CERABOARD data sheet.

Strong Board is produced by the addition of selected refractory fillers to the ceramic fibre in order to improve its mechanical properties. Strong Board has two times the strength of 1260 Board, both when measured fired and unfired.

All Board formulations contain a small amount of organic binder to improve the cold handling strength and this burns out on first firing at approximately 200-300°C. Heat treatment can be made to burn the organic binders on special request.

APPLICATIONS

Iron and steel

Expansion joints, back-up insulation, heat shields and mould base insulation.

Non-ferrous

Tundish and launder covers in the casting of copper and copper-based alloys.

Ceramics

Hot-face lining for kilns and in construction of LTM kiln cars.

Glass

Back-up insulation in melting furnaces and protection of burners.

Furnace building

Hot face lining material (alternative to blanket); back-up to solid refractories; expansion joints.

Light industry

Lining combustion chambers in industrial and domestic boilers.

Petrochemical

High temperature heater lining hot-face material.

"Kaowool" is a registered trademark.

Kaowool™ Board



Main properties

		Kaowool Board 1260	Kaowool Strong Board 1260	Kaowool Board 1400	Kaowool Board 1600	Kaowool Board 1600S
Classification temperature	°C	1260	1260	1400	1500	1600
Properties Measured at Ambient Conditions (23°C/50% RH)						
Colour		white/tan	white/tan	white/tan	white/tan	white/tan
Density	kg/m ³	280	330	260	240	200
Modulus of rupture (unfired)	MPa	1.05	2.7	0.99	0.99	0.88
Modulus of rupture (fired 15 min/650°C)	MPa	0.58	1.1	0.35	0.30	0.24
Compressive strength (5% reduction in thickness)	MPa	-	0.56	-	-	
High Temperature Performance						
Loss of ignition	%	5-7	5-10	5-10	5-10	5-10
Thermal conductivity (ASTM-C-201) at mean temperatures of:						
200°C	W/m.K	0.07	0.06	0.06	-	-
400°C	W/m.K	0.09	0.09	0.08	0.07	0.06
600°C	W/m.K	0.11	0.12	0.10	0.09	0.08
800°C	W/m.K	0.15	0.16	0.13	0.12	0.10
1000°C	W/m.K	-	-	0.18	0.16	0.14
1200°C	W/m.K	-	-	0.23	0.22	0.20
1400°C	W/m.K	-	-	-	0.28	0.26

Availability

Sheet size: 1200 x 1000, 1000 x 1000, 1000 x 500mm.

Thickness: From 5 to 150 mm depending of the mix.

Other thicknesses and sheet sizes can be supplied to special order.

Tolerances

All boards are subject to our standard tolerances.

- Th 6 to 10 mm +/-1 mm
- 15 +/- 1.5 mm
- Above 20 +/- 2 mm

However, special machining operations can be undertaken to improve these, if necessary.

Boards, can be further toughened by the application of a hardening solution.

The values given herein are typical values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Therefore, the data contained herein should not be used for specification purposes. Check with your Thermal Ceramics office to obtain current information.