

# Kaowool® and Cera® Boards and VF Shapes

## Product Data Sheet



### Product Description

Kaowool and Cera Shapes are insulating products made from a mixture of refractory ceramic fibres through a vacuum forming process.

The Vacuum Forming manufacturing process allows for a variety of configurations, tailored to the particular application and ranging from simple sections (such as sleeves or cones) to complex shapes.

Compositions are available for service temperatures from 1260°C to 1600°C (2300°F to 2912°F).

Kaowool and Cera Shapes can also be produced in a strong composition which gives higher strength and density. Thermal properties are similar to the normal grades but with improved resistance to erosion.

Kaowool 1260LB is a flexible shape which provide good dimensional resilience after compression and make utilization of these shapes very easy where rigid shapes are unsuitable. Kaowool 1400 can also be offered in flexible form.

Kaowool Shapes may also be supplied as a Wet Pak Sheet in size of 1000 x 1000mm (40x40in), packed wet into individual plastic bags. The Wet Pak Sheets can be formed in situ to any shape desired, which on drying develops properties similar to those of Kaowool Shape products. Wet Pak has a shelf life in a moist state of up to 42 days provided that the bags remain sealed and are maintained at temperatures within the range of 10°C to 50°C (50°F to 122°F).

All shapes have low shrinkage at temperatures within their service rating and retain the properties of high insulation light weight and resistance to thermal shock which are characteristic of our Kaowool and Cera fibres.

The unfired material can be easily cut or machined.

### Special Treatment

Kaowool Hardener or Cement may be applied if required to shapes in order to provide a protective surface coating up to a temperature of 1260°C. Kaowool 1260 shapes can also be dipped in a hardening solution to meet individual customer requirements.

### Features

- High temperature stability
- Low thermal conductivity
- Low heat storage
- Rigidity and high cohesive strength allow machining and cutting
- Resistant to thermal shock
- Good erosion resistance
- Can be used in direct contact with flame
- Easy application

### Applications

These versatile products can be used where rigid shapes, self supporting are required for high temperature insulation (according to the mix). Customize to customer drawing specifications.

Kaowool 1260LB is particularly recommended for sealing applications.

- Expansion joints
- Furnace lining
- Electrical kilns
- Laboratory equipment
- Glass & Petrochemical industry

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Properties	Kaowool 1260	Kaowool Strong	Kaowool 1260LB	Kaowool 1400	Kaowool 1600	Ceraform 400
Region of Manufacture	EMEA	EMEA	EMEA	EMEA	EMEA	EMEA
Colour	White / Tan	White / Tan	White / Tan	White / Tan	White / Tan	Grey
Fibre Grade, Organic or Inorganic	Organic	Organic	Organic	Organic	Organic	Organic
Classification Temperature, °C (°F), ISO 10635	1260 (2300)	1260 (2300)	1260 (2300)	1400 (2550)	1600 (2912)	1260 (2300)
Density, kg/m <sup>3</sup> (pcf), ASTM C612-14	280 (17.4)	330 (20.6)	200 (12.5)	260 (16.2)	320 (20)	390 (24.3)
Modulus of Rupture, MPa, Unfired	>1.4	2.7	Flexible	>0.99	>0.4	
<b>Thermal Conductivity, W/m·K (BTU·in/hr·ft<sup>2</sup>·°F), ASTM C201</b>						
200°C (392°F)	0.07	0.06 (0.42)	0.07 (0.49)	0.06 (0.42)	-	0.09 (0.62)
400°C (752°F)	0.09	0.09 (0.62)	0.09 (0.62)	0.08 (0.56)	0.06 (0.42)	0.1 (0.69)
600°C (1112°F)	0.11	0.12 (0.83)	0.11 (0.76)	0.1 (0.69)	0.08 (0.56)	0.12 (0.83)
800°C (1472°F)	0.15	0.16 (1.11)	0.15 (1.04)	0.13 (0.90)	0.1 (0.69)	0.16 (1.11)
1000°C (1832°F)	-	-	-	0.18 (1.25)	0.14 (0.97)	0.22 (1.53)
1100°C (2012°F)	-	-	-	-	-	-
1200°C (2192°F)	-	-	-	0.23 (1.60)	0.2 (1.39)	-
1400°C (2552°F)	-	-	-	-	0.26 (1.80)	-

### Standard Dimensions and Availability

Kaowool and Cera Boards are manufactured and packaged for Europe regional business. These shapes may also be manufactured in bespoke shapes, sizes and thicknesses to meet individual customer requirements. Please contact your regional Morgan Advanced Materials - Thermal Ceramics representative to support packaging availability for your regional business needs.

Product	Standard dimensions,	Thicknesses, mm (in)
Kaowool 1260	1000 x 1000 (40 x 40) 1000 x 500 (40 x 20)	10, 20, 25, 30, 40, 50, 60, 70, 80, 90, 100 (0.4, 0.8, 1.2, 1.6, 2, 2.4, 2.8, 3.2, 3.6, 4)
Kaowool 1400		
Kaowool 1600		

The product(s) represented are intended for industrial refractory applications. The values and application information in this datasheet are given for guidance only. The values and the information given are subject to normal manufacturing variation and may be subject to change without notice. Morgan Advanced Materials – Thermal Ceramics makes no guarantees and gives no warranties about the suitability of a product, and you should seek advice to confirm the product's suitability for use with Morgan Advanced Materials.