



Kaowool[®] Boards & Shapes

Product Data Sheet

Product Description

Kaowool Boards and Shapes 1260 IN, 1260DX IN, 1400 IN, 1260S IN, and SS800 are rigid, self-supporting fiber insulation boards and shapes designed for use in applications requiring higher rigidity than blanket forms.

The Kaowool Boards and Shapes are manufactured by a vacuum forming technology providing for a wide range of dimensional choices, with an excellent homogeneity throughout the forming process of the boards and shapes.

Customers are provided with optimized, engineered solutions from our wide range of formulations.

These Boards and Shapes 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.

Features

- Rigid, lightweight, hot face insulation
- Resistant to particulate and hot gas erosion
- Engineered formulations for high strength and temperature resistance
- Low thermal conductivity and heat storage
- Highly resistant to thermal shock
- Resists most chemical attacks
- Non-wetting to molten aluminium and other non-ferrous metals
- Easy to cut, handle and install
- Up to 50% reduction in furnace lining thickness, as compared to firebrick and castable

Applications

- Furnace and kiln hot face linings
- Back-up insulation for monolithic and brick refractories
- Ladle liners and covers
- Aluminum trough liners and special shapes
- Riser sleeves, tap out cones and hot tops
- Combustion chambers for boilers and heaters
- Hot gas duct, flue and chimney liners
- Heat processing insulation
- Bullnose tiles
- Burner blocks
- Glass regenerator, tank side, end wall and port neck insulation
- Back-up insulation in steel ladle, tundishes, and torpedo cars

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Properties	Kaowool 1260 Board IN	Kaowool 1260S Board IN	Kaowool SS800 Board	Kaowool 1400 Board IN	Kaowool HS45 1260 Board IN	Kaowool 1050LD Board
Region of Manufacture	Asia	Asia	Asia	Asia	Asia	Asia
Colour	White to Tan	White to Tan	White to Tan	White to Tan	White to Tan	White
Classification Temperature, °C (°F), ISO 10635	1260(2300)	1260(2300)	1260(2300)	1400(2552)	1260(2300)	1050(1922)
Continuous Use Temperature, °C (°F)	1100 (2012)	1100 (2012)	1100 (2012)	1250 (2282)	1100 (2012)	950 (1742)
Density, kg/m ³ (pcf), ASTM C612-14	260(16)	330(20)	800(50)	260(16)	720(44.94)	-
Compressive strength, 10% deformation, MPa (psi), ASTM C165	0.1(14.5)	0.3(43.5)	2(290)	0.1(14.5)	1(145)	120(17)
Permanent Linear Shrinkage, %, ISO 10635						
1050°C (1922°F)	-	-	-	-	-	3.5
1200°C (2192°F)	4	4	1	-	1	-
1350°C (2462°F)	-	-	-	4	-	-
Modulus of Rupture, Unfired, MPa (psi), ASTM C165						
≤ 25mm (1in), minimum	0.5 (72.5)	1.0 (145)	5 (725)	0.5(72.5)	-	-
> 25mm (1in), minimum	-	-	-	-	3(435)	200(29)
Loss of Ignition, LOI, %, EN 1094-1						
after 2 hours heating @ 800°C (1472°F)	10	10	10	10	10	10
Chemical Analysis, %						
Alumina, Al ₂ O ₃	40	44	48	29	51.5	44
Silica, SiO ₂	60	56	40	55	35	56
Zirconia, ZrO ₂	-	-	-	10	-	-
Calcium oxide, CaO	-	-	10	-	10.5	-
Thermal Conductivity, W/m·K, ASTM C201						
800°C	-	-	-	-	-	0.16
1000°C	0.21	0.16	0.22	0.21	0.23	-

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Properties	Kaowool 1260 Shapes IN	Kaowool 1260DX Shapes IN	Kaowool 1260S Shapes IN	Kaowool 1425 Shape	Kaowool HS45 1260 Shapes IN
Region of Manufacture	Asia	Asia	Asia	Asia	Asia
Colour	White	White	White	White	White
Classification Temperature, °C (°F), ISO 10635	1260(2300)	1260(2300)	1260(2300)	1425(2597)	1260(2300)
Continuous Use Temperature, °C (°F)	1100(2012)	1100(2012)	1100(2012)	1300(2372)	1100(2012)
Density, kg/m ³ (pcf), ASTM C612-14	260 (16)	330 (20.6)	330 (20.6)	260 (16)	260 (16)
Permanent Linear Shrinkage, %, ISO 10635					
1200°C (2192°F)	4	4	-	-	1
1350°C (2462°F)	-	-	-	4	-
Loss of Ignition, LOI, %, EN 1094-1					
after 2 hours heating @ 800°C (1472°F)	10	4-9	10	10	10
Chemical Analysis, %					
Alumina, Al ₂ O ₃	40	34	44	29	50
Silica, SiO ₂	60	60	56	55	35
Zirconia, ZrO ₂	-	-	-	10	10

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Properties	Kaowool Tapout Cone 1260	Kaowool Tapout Cone 1400	Kaowool Peep Hole Block 1260	Kaowool Peep Hole Block 1400
Region of Manufacture	Asia	Asia	Asia	Asia
Colour	White	White	White to TAN	White to TAN
Classification Temperature, °C (°F), ISO 10635	1260 (2300)	1400 (2552)	1260 (2300)	1400 (2552)
Continuous Use Temperature, °C (°F)	1100 (2012)	1300 (2372)	1100 (2012)	1300 (2372)
Density, kg/m ³ (pcf), ASTM C612-14	230(14.4)	230(14.4)	325 (20.3)	325 (20.3)
Permanent Linear Shrinkage, %, ISO 10635				
1200°C (2192°F)	4	-	4	-
1350°C (2462°F)	-	4	-	4
Loss of Ignition, LOI, %, EN 1094-1				
after 2 hours heating @ 800°C (1472°F)	10	10	-	-
Chemical Analysis, %				
Alumina, Al ₂ O ₃	40	29	40	29
Silica, SiO ₂	60	55	60	55
Zirconia, ZrO ₂	-	10	-	10

Product Availability

Kaowool Boards and Shapes 1620IN, 1260DX, 1400, 1260S, and SS880 are manufactured in Asia. They are available globally. Please contact your regional Morgan Advanced Materials - Thermal Ceramics representative to support providing specific packaging availability for your local business needs.

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