

Product Description

Kaogun 32 is a thermally stable 1760°C (3200°F) gunning mix incorporating a high-purity, calcium-aluminate cement designed for low rebound. The combination of bauxite and calcined kaolin grain sizing produces thermal stability throughout the temperature range.

Instructions for Using

Gunning: Use suitable gunite equipment. Material should be pre-dampened uniformly with approximately 3-4% by weight of clean water in a mechanical mixer before placing into gun. This will reduce rebound and dust. Add required water at nozzle for effective placement. Suggested air pressure at the nozzle is 2.5 to 3.5 bar (35 to 50 psi).

Watertight forms must be used when placing material. All porous surfaces that will come in contact with the material must be waterproofed with a suitable coating or membrane. For maximum strength, cure 24 hours in a damp condition before initial heat-up. Keep freshly placed monolithic warm during cold weather, ideally between 16°C and 27°C (60°F and 80°F) during wet curing process. New monolithic installations must be heated slowly the first time.

For detailed installation instructions and commissioning schedules, please contact your Morgan Advanced Materials-Thermal Ceramics representative.

Properties	Kaogun 32
Region of Manufacture	Americas
Bond type	Hydraulic
Raw material base	Bauxite
Method of installation	Gun
Maximum grain size, mm	7
Maximum service temperature, °C (°F)	1760 (3200)
Net material requirement, kg/m ³ (pcf)	2403 (150)
Packaging in bags, kg (lbs)	25 (55)

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.

Kaogun™ 32 Monolithic

Product Data Sheet



Properties		Kaogun 32
Bulk Density, kg/m³ (pcf), ASTM C134		
	fired 5 hours @ 816°C (1500°F)	2275 - 2499 (142-156)
Modulus of Rupture, MPa (psi), ASTM C133		
	dried 24 hours @ 105°C (220°F)	2.8-4.8 (400-700)
	fired 5 hours @ 816°C (1500°F)	2.4- 4.1 (350-600)
	fired 5 hours @ maximum service temperature °C (°F)	4.1-6.9 (600-1000)
Cold Crushing Strength, MPa (psi), ASTM C133		
	dried 24 hours @ 105°C (220°F)	20.7-44.8 (3000-6500)
	fired 5 hours @ 816°C (1500°F)	20.7-41.1 (3000-6000)
	fired 5 hours @ maximum service temperature °C (°F)	31.0-55.2 (4500-8000)
Permanent Linear Change, %, ASTM C113		
	dried 24 hours @ 105°C (220°F)	0 to -0.2
	fired 5 hours @ 816°C (1500°F)	-0.1 to -0.3
	fired 5 hours @ maximum service temperature °C (°F)	0 to -2.0
Chemical Analysis, %, Calcined Basis		
	Alumina, Al ₂ O ₃	79
	Silica, SiO ₂	13
	Iron Oxide, Fe ₂ O ₃	1.1
	Titania, TiO ₂	2.2
	Lime, CaO	4.1
	Magnesia, MgO	0.1
	Alkali as, Na ₂ O + K ₂ O	0.4
Thermal Conductivity, W.m•K (BTU•in/hr•ft²•°F), ASTM C417		
	260°C (500°F)	1.17 (8.1)
	538°C (1000°F)	1.18 (8.2)
	816°C (1500°F)	1.17 (8.1)
	1093°C (2000°F)	1.15 (8.0)

Storage and Shelf Life

- Monolithics should be stored in a dry, well-ventilated area and held off the ground on pallets ideally with the original packaging intact. Keep out of rain and damp conditions.
- Normal shelf life is 12 months from date of manufacture when properly stored.

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