Kaocrete® 26 Monolithic

Product Data Sheet

Product Description

Kaocrete 26 is a general purpose, cast/gun, low iron monolithic for applications up to 1427°C (2600°F).

Instructions for Using

Casting: Highest strength is obtained with monolithic refractory by using the least amount of clean mixing water that will allow thorough working of material into place by vibration. A mechanical mixer is required for proper placement (paddle type mortar mixers are best suited). After adding the recommended amount of water, wet mix for 3 minutes. Place material within 30 minutes after mixing.

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) until wet curing is complete. 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	Kaocrete 26
Region of Manufacture	Americas
Bond type	Hydraulic
Raw material base	Chamotte
Method of installation	Cast/Gun
Maximum grain size, mm	6
Maximum service temperature, °C (°F)	1427 (2600)
Net material requirement, kg/m^3 (pcf)	2018 (126)
Water addition, % by weight	
casting by vibrating	10-12
Packaging in bags, kg (lbs)	25 (55)

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Bulk Density, kg/m^3 (pcf), ASTM C134	
fired 5 hours @ 816°C (1500°F)	1938-2114 (121-132)
Modulus of Rupture, MPa (psi), ASTM C133	
dried 24 hours @ 105°C (220°F)	3.1-5.9 (450-850)
fired 5 hours @ 816°C (1500°F)	2.1-3.1 (250-450)
fired 5 hours @ maximum service temperature °C (°F)	5.5-10.3 (800-1500)
Cold Crushing Strength, MPa (psi), ASTM C133	
dried 24 hours @ 105°C (220°F)	17.2-27.6 (2500-4000)
fired 5 hours @ 816°C (1500°F)	13.8-24.1 (2000-3500)
fired 5 hours @ maximum service temperature °C (°F)	19.3-27.6 (2800-4000)
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)	-0.4 to -1.0
Chemical Analysis, %, Calcined Basis	
Alumina, Al_2O_3	47
Silica, SiO_2	43
Iron Oxide, Fe_2O_3	1.1
Titania, TiO_2	2.4
Lime, CaO	6.4
Alkali as, $Na_2O + K_2O$	0.2
Thermal Conductivity, W.m•K (BTU•in/hr•ft^2•°F), ASTM C417	
260°C (500°F)	0.81 (5.6)
538°C (1000°F)	0.86 (6.0)
816°C (1500°F)	0.91 (6.3)
1093°C (2000°F)	0.92 (6.4)

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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