



Kaolite 2300 LI AHR

Product Data Sheet

Product Description

Kaolite 2300 LI AHR is a low iron, lightweight monolithic with a special formulation to prevent alkali hydrolysis.

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). Mix for 3-6 minutes to achieve a good ball-in-hand consistency. Place material within 20 minutes after mixing.

Precautions: 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 under damp conditions 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 completed. New monolithic installation must be heated slowly the first time.

Properties	Kaolite 2300LI AHR
Region	Americas
Bond type	Hydraulic
Method of installation	Cast
Maximum grain size, mm	6
Maximum service temperature, °C (°F)	1260 (2300)
Net material requirement, kg/m3 (pcf)	1009 (63)
Water addition, % by weight	40-47
Packaging in bags, kg (lbs)	18 (40)
Shelf life, months	9

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Bulk Density, kg/m3 (pcf), ASTM C134		
	dried 24 hours @ 105°C (220°F)	993-1169 (62-73)
	fired 5 hours @ 815°C (1500°F)	881-1121 (55-70)
Modulus of Rupture, MPa (psi), ASTM C133		
	dried 24 hours @ 105°C (220°F)	1.38-2.76 (200-400)
	fired 5 hours @ 815°C (1500°F)	0.90-1.52 (130-220)
	fired 5 hours @ maximum service temperature °C (°F)	1.38-2.41 (200-350)
Cold Crushing Strength, MPa (psi), ASTM C133		
	dried 24 hours @ 105°C (220°F)	6.90-10.34 (1000-1500)
	fired 5 hours @ 815°C (1500°F)	2.41-6.90 (350-1000)
	fired 5 hours @ maximum service temperature °C (°F)	4.83-10.34 (700-1500)
Permanent Linear Change, %, ASTM C113		
	dried 24 hours @ 105°C (220°F)	0 to -0.2
	fired 5 hours @ 815°C (1500°F)	-0.1 to -0.6
	fired 5 hours @ maximum service temperature °C (°F)	-1.0 to -2.0
Chemical Analysis, %		
	Alumina, Al ₂ O ₃	43.0
	Silica, SiO ₂	44.0
	Magnesium oxide, MgO	0.2
	Calcium oxide, CaO	10.5
	Ferric oxide, Fe ₂ O ₃	0.4
	Titanium oxide, TiO ₂	1.0
	Alkalies, as Na ₂ O and K ₂ O	1.0
Thermal Conductivity, W/m•K (BTU•in/hr•ft ² •°F), ASTM C417		
	260°C (500°F)	0.28 (1.96)
	538°C (1000°F)	0.29 (2.01)
	816°C (1500°F)	0.31 (2.15)
	1093°C (2000°F)	0.32 (2.23)
Abrasion loss, cm ³ , ASTM C704		
	fired 5 hours @ 815°C (1500°F)	

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 9 months from date of manufacture when properly stored.

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