CERAMITE AFA SERIES

FUSED ALUMINA BASED CASTABLE REFRACTORY

Ceramite® AFA Series is a castable refractory material based on fused alumina. Used in demanding applications with extreme temperature requirements, Ceramite AFA's ceramic bonding provides high strength and good thermal and chemical resistance. Products made from Ceramite AFA are cast into a finished shape and fired prior to delivery. The aggregates in this formulation have a maximum grain size of 6 millimetres (0.24 inches).

COMPOSITION

Material	Approximate Weight
Al_2O_3	92%
SiO_2	8%
CaO	<0.5%
Fe_2O_3	<0.5%

BENEFITS

- High maximum service temperature
- Good strength
- Moderate thermal conductivity
- Good chemical resistance

AVAILABILITY

Cast and pre-fired parts

STORAGE

Pre-fired, cast Ceramite parts for hot applications must not be exposed to water or moisture. If exposed, a full sequence of preheating must be performed.

HEALTH AND SAFETY

Prior to use, refer to the product safety data sheet for proper handling and required personal protective equipment.

Pyrotek

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Property	Temperature	Value
Density–kg/m³ (lb/ft³)	20°C (68°F)	3200 (200)
	1000°C (1832°F)	3100 (194)
Cold Modulus of Rupture–MPa (psi)	20°C (68°F)	2 (290)
	1000°C (1832°F)	29 (4200)
	1200°C (2192°F)	38 (5510)
	1500°C (2732°F)	32 (4640)
Cold Compressive Strength–MPa (psi)	20°C (68°F)	9 (1300)
	1000°C (1832°F)	193 (27,990)
	1200°C (2192°F)	200 (29,000)
	1500°C (2732°F)	>250 (36,260)
Hot Modulus of Rupture–MPa (psi)	1000°C (1832°F)	>28 (4060)
Abrasion*–cm³ (in³)	20°C (68°F)	5.9 (0.36)
	1000°C (1832°F)	1.1 (0.07)
Thermal Conductivity–W/m·K (BTU·in/ft²·hr·°F)	300°C (572°F)	4.3 (29.80)
	600°C (1112°F)	3.7 (25.70)
	900°C (1652°F)	3.4 (23.60)
Linear Thermal Expansion, 20–850°C (68–1562°F)		0.6%
Permanent Linear Change, 20–850°C (68–1562°F)		–0.08%
Maximum Service Temperature		1800°C (3270°F)
Maximum Grain Size–mm (in)		6 (~0.24)
* The abrasion test was performed per the DIN 52108 standard and pre-fired at the indicated temperature.		