CERAMITE INS

BAUXITE REFRACTORY CASTINGS

Ceramite® INS is a cast refractory using a bauxite based material, providing properties of electrical insulation, high mechanical strength and wear resistance. The aggregates in this formulation have a maximum grain size of approximately 4 millimetres (0.16 inches) and the castings have a maximum service temperature of 1000°C (1832°F).

Ceramite INS blocks have passed Nemko electrical insulation testing under the application of 500 volts direct current and up to 5000 volts alternating current with no flash-over.

COMPOSITION

Material	Approximate Weight (Precast Blend)
Al_2O_3	80%
SiO_2	10%
CaO	5%
Fe_2O_3	1%

BENEFITS

- Excellent electrical insulation
- Good mechanical strength
- Good wear resistance

APPLICATIONS

- Crust breaker insulators
- Electrical insulation between steel pipes in potrooms

AVAILABILITY

Ceramite INS is available on as a precast, pre-fired casting.

STORAGE

Precast shapes must remain dry and stored away from moisture. If exposed, a full sequence of preheating must be performed.

Pyrotek®

CERAMITE INS

Property	Temperature	Value
Density–kg/m³ (lb/ft³)	20°C (68°F)	2800 (175)
	600°C (1112°F)	2800 (175)
Cold Modulus of Rupture–MPa (psi)	20°C (68°F)	15 (2180)
	500°C (932°F)	25 (3630)
	600°C (1112°F)	30 (4350)
	850°C (1562°F)	20 (2900)
Cold Compressive Strength–MPa (psi)	20°C (68°F)	145 (21,000)
	500°C (932°F)	215 (31,200)
	600°C (1112°F)	230 (33,400)
	850°C (1562°F)	150 (21,800)
Abrasion*–cm³ (in³)	20°C (68°F)	4.0 (0.24)
	600°C (1112°F)	4.0 (0.24)
Thermal Conductivity–W/m·K (BTU·in/ft²·hr·°F)	300°C (572°F)	3.2 (22.2)
	600°C (1112°F)	2.7 (18.7)
	900°C (1652°F)	2.5 (17.4)
Linear Thermal Expansion, 20–850°C (68–1562°F)		0.6%
Permanent Linear Change, 20–850°C (68–1562°F)		–0.03%
Maximum Service Temperature		1000 °C (1832 °F)
Maximum Grain Size–mm (in)		4 (0.16)
* The abrasion test was performed per the DIN 52108 standard and pre-fired at the indicated temperature.		

Note: The physical and chemical properties listed represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice.

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