PYROCAST 82

INSULATING CASTABLE REFRACTORY

Pyrocast 82 is a lightweight, fused silica based, highly insulating refractory product which resists molten aluminium erosion and thermal shock. It is non-wetting to aluminium and zinc alloys in molten metal transfer applications.

Pyrocast 82 is a durable material with a smooth finish and a lightweight castable insulation value. It is used for troughs and other aluminium casting components.

COMPOSITION

Material	Approximate Percentage of Weight
SiO_2	59.2%
Al_2O_3	33.3%
CaO	5.0%
Fe_2O_3	0.7%

BENEFITS

- Non-wetting
- Smooth surface finish
- Excellent durability
- High insulating properties
- Low start-up shrinkage, dimensionally stable at working temperature
- Thermal shock resistant

APPLICATIONS

- Troughs
- Casting table cross-sections
- Distribution troughs in slab ingot casting

AVAILABILITY

Precast shapes

PHYSICAL PROPERTIES

Property	Value
Permanent Linear Change–Shrinkage at 540°C (1000°F) at 815°C (1500°F) at 1100°C (2000°F)	 -0.03% -0.01% 0.20%
Density–kg/m³ (lb/ft³) at 110°C (230°F) at 540°C (1000°F) at 815°C (1500°F) at 1100°C (2000°F)	 1520 (95) 1460 (91) 1450 (90) 1410 (88)
Modulus of Rupture–MPa (psi) at 110°C (230°F) at 540°C (1000°F) at 815°C (1500°F) at 1100°C (2000°F)	 3.3 (480) 1.9 (280) 2.1 (300) 2.5 (360)
Cold Crushing Strength–MPa (psi) at 110°C (230°F) at 540°C (1000°F) at 815°C (1500°F) at 1100°C (2000°F)	 18.9 (2740) 13.3 (1930) 13.8 (2000) 11.4 (1650)
Thermal Conductivity– W/m·K (BTU·in/ft²·hr·°F) at 540°C (1000°F) at 815°C (1500°F)	 0.50 (3.50) 0.57 (3.96)
Grain Size–mm (in)	5 (0.20)
Maximum Use Temperature	1200°C (2200°C)

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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Product Type: 114, 120, 124, 183
Commodity Code: 02107