



# PYROCAST FS73 AL

## CASTABLE REFRACTORY

Pyrocast FS73 AL is a fused silica castable refractory that is non-wetting to liquid aluminium and its alloys. The material is high-strength and offers excellent erosion and mechanical damage resistance. Pyrocast FS73 AL parts are heat-treated to ensure any free or combined water is removed prior to shipment. Pyrocast FS73 AL floats in molten aluminium, minimizing refractory inclusion potential.

### COMPOSITION

Material	Approximate Percentage of Weight
SiO <sub>2</sub>	73.4%
Al <sub>2</sub> O <sub>3</sub>	22.7%
CaO	3.7%

### BENEFITS

- Dimensionally stable
- Thermal shock resistant
- Cleans easily
- Extremely durable
- Smooth cast surface
- Non-wetting

### APPLICATIONS

- Hot-top table sections
- Transfer and stub troughs
- Trough linings
- Filter boxes
- Sheet ingot spouts
- Control pins
- Furnace tubes

### AVAILABILITY

- Precast shapes
- Reline projects with steel work components



### PHYSICAL PROPERTIES

Property	Value
Linear Expansion at 110°C (230°F) at 500°C (930°F) at 815°C (1500°F)	0.0% -0.1% -0.1%
Density–g/cm <sup>3</sup> (lb/ft <sup>3</sup> ) at 110°C (230°F) at 500°C (930°F) at 815°C (1500°F)	2.11 (132) 2.05 (128) 2.05 (128)
Modulus of Rupture–MPa (psi) at 110°C (230°F) at 500°C (930°F) at 815°C (1500°F)	8.2 (1190) 5.9 (860) 4.3 (620)
Hot Modulus of Rupture–MPa (psi) at 815°C (1500°F)	10.8 (1570)
Cold Crushing Strength–MPa (psi) at 110°C (230°F) at 500°C (930°F) at 815°C (1500°F)	65.5 (9500) 42.7 (6200) 33.1 (4800)
Maximum Service Temperature	1200°C (2200°F)
Thermal Conductivity– W/m-K (BTU·in/ft <sup>2</sup> ·hr·°F) at 110°C (230°F) at 500°C (930°F) at 815°C (1500°F) at 955°C (1750°F)	1.23 (8.51) 1.08 (7.46) 1.15 (8.00) 1.14 (7.90)
Grain Size–mm (in)	4.75 (0.19)

