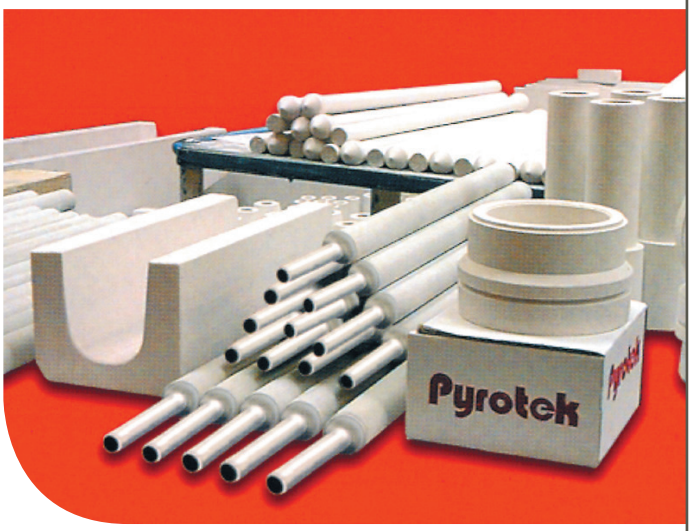
PYROCAST XL3

SMALL COMPONENT REFRACTORY

Pyrocast XL3 is a small component fused silica refractory castable that is non-wetting to high temperature molten aluminium and its alloys. The product has optimized packing density, high strength and is erosion resistant. Pyrocast XL3 floats in molten aluminium, minimizing refractory inclusion potential.



COMPOSITION

Material	Approximate Percentage of Weight
SiO_2	54%
Al_2O_3	36.7%
CaO	6.3%
Other	3%

BENEFITS

- Thermal shock resistant
- High erosion resistance
- High service temperature
- Smooth cast surface
- Dimensionally stable
- Cleans easily
- Non-wetting

APPLICATIONS

- Down spouts
- Control pins
- Strip casting nozzles

AVAILABILITY

Precast shapes

HEALTH AND SAFETY

Pyrocast XL3 parts are heat-treated prior to shipment to remove free or combined water. However, it is very likely water reabsorption will occur during transport and storage. To help prevent risk of explosion upon contact with molten metal, Pyrocast XL3 parts must be pre-heated to an internal core temperature of at least 350°C (662°F) prior to molten metal contact. The time required to achieve this temperature varies by part geometry. Pyrotek recommends following all industry and facility best practices for pre-heating, and all Pyrocast XL3 parts being pre-heated for a minimum three-hour soak at 350°C (662°F). Larger parts may require longer heating times. For more specific guidance, please contact your sales representative.

PHYSICAL PROPERTIES

Property	Value
Cast Density–kg/m³ (lb/ft³)	1900–1950 (118.61–121.73)
Apparent Porosity	22–23%
Permanent Linear Change–Shrinkage at 700°C (1292°F)	0.077%
Mean Thermal Expansion Coefficient–mm/mm/°C (in/in/°F) at 200–700°C (392–1292°F)	0.82×10^{-6} (0.46×10^{-6})
Maximum Service Temperature	1000°C (1832°F)
Cold Crushing Strength–MPa (psi) at 725°C (1337°F)	55 (7977.08)
Modulus of Rupture–MPa (psi) at 725°C (1337°F)	8 (1160.30)
Thermal Conductivity–W/m·K (BTU·in/ft²·hr·°F) at 460°C (860°F) at 610°C (1130°F) at 790°C (1454°F)	 0.86 (5.97) 0.88 (6.11) 0.93 (6.45)

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: 106, 144, 150, 158, 173, 180
Commodity Code: 02024