



# PYROTEK SHELL INSULATED TABLETOP REFRACTORY

## FOR VERTICAL DIRECT CHILL (VDC) BILLET CASTING

Pyrotek Shell Insulated Tabletop Refractory (also known as Armallite 95) is a hot-facing refractory with a durable fused silica shell (FS73 AL\*) and a precast insulating backup layer. Each shell insulated refractory castable is engineered to optimize mechanical strength and crack resistance while maintaining excellent insulation properties.\* Energy is retained in the metal by reducing heat loss through the casting table.

The dual-material design offers improvements in product life, abrasion resistance and improved heat latency between casts. The refractory also has a smooth inner surface that reduces aluminium oxide buildup and provides low thermal expansion for reduced joint maintenance.

When combined with ZYP Boron Nitride Lubricoat® coatings, the Pyrotek Shell Tabletop Refractory's life can be extended.

\* Pyrocast FS73 AL, this product's default refractory material is available in monolithic form.



### BENEFITS

- No refractory ceramic fibres (non-RCF)
- Thermal shock resistant
- Consistent component fit
- Hard refractory surface
- Excellent thermal performance
- Non-wetting for easy cleaning
- Low thermal expansion

### APPLICATIONS

- VDC billet casting tabletop refractory
- Precast shapes
- All aluminium alloys

### PHYSICAL PROPERTIES

Material Property	Measured Value
Density (shell)– g/cm <sup>3</sup> (lb/ft <sup>3</sup> )	2.1 (132)
Density (backup layer)– kg/m <sup>3</sup> (lb/ft <sup>3</sup> )	721 (45)
Modulus of Rupture– MPa (psi)	8.6 (1247) @ 25°C (77°F)
Coefficient of Thermal Expansion– mm/mm·°C (in/in·°F)	0.81 x 10 <sup>-6</sup> (0.45 x 10 <sup>-6</sup> )
Thermal Conductivity– W/m·K (BTU·in/ft <sup>2</sup> ·hr·°F)	0.16 (1.11) @ 300°C (572°F) 0.21 (1.46) @ 500°C (932°F) 0.26 (1.80) @ 700°C (1292°F)
<small>NOTE: Measured with default construction materials (FS73AL shell and Wollite 45 backup).</small>	

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