

Monofrax[®] H Beta Alumina Fused Cast Refractory

Product Description

Monofrax[®] H is an essentially 100% beta alumina refractory. It offers maximum corrosion resistance to alkali rich gaseous environments. Recommended for superstructure applications only, this material can be heavily insulated.

Manufacturing Description

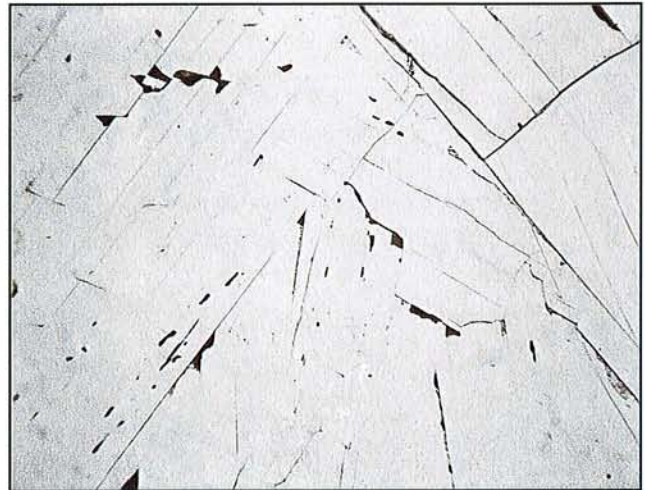
Monofrax H is melted at a very high temperature in an electric arc furnace. The manufacturing process has been optimized to achieve superior surface quality and overall chemical and physical properties. This product is available in many shapes and sizes; produced with and without casting voids. State-of-the-art grinding equipment is used to provide excellent surface and joint quality.

Typical Chemistry

Al ₂ O ₃	93%
Na ₂ O	6%
Other	<1%

Typical Applications

- Glass furnace
 - Port neck arches
 - Refiner superstructure
 - Burner blocks
 - Glass ceramic
- Oxy-fuel combustion atmospheres
 - Crowns (high alkaline)



Micrograph Description

This photomicrograph illustrates the coarse, intergrowth of beta alumina crystals. This material is essentially free of a grain boundary phase.



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Monofrax[®] H Beta Alumina Fused Cast Refractory

Typical Physical Properties:

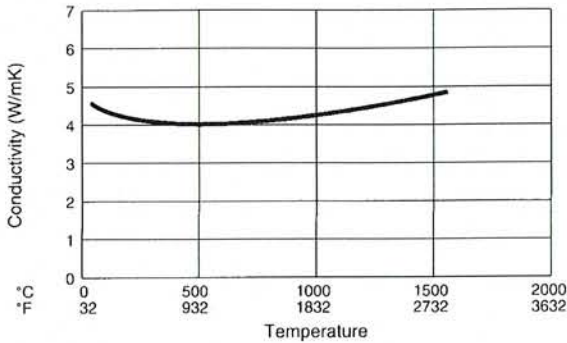
Bulk Density - lb./ft ³ (gm/cc)	195 (3.12)
(excluding shrinkage cavity)	
Apparent Porosity %	<4
Linear Change Under Load % ¹	0
Modulus of rupture	
Cold psi (kg/cm ²) ²	600 (42)
Hot psi (kg/cm ²) ³	1,130 (80)
Cold Crushing Strength psi (kg/cm ²) ²	
.....	9,000 (635)

Available Casting Techniques

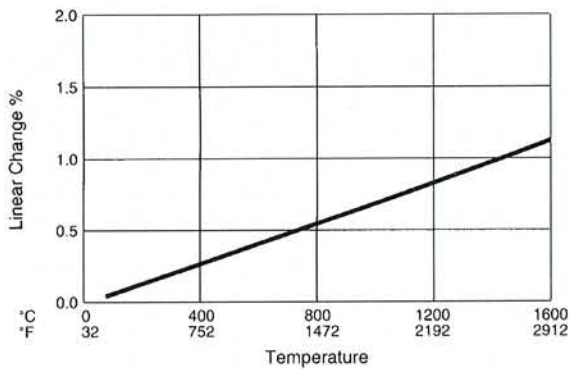
- Regular Cast
- DCL (Essentially void-free)

1 ASTM C-832, 29 psi
 2 DIN-51053, 29 psi, 100 hours
 3 ASTM C-133
 4 ASTM C-583, 2750F, 3 hours

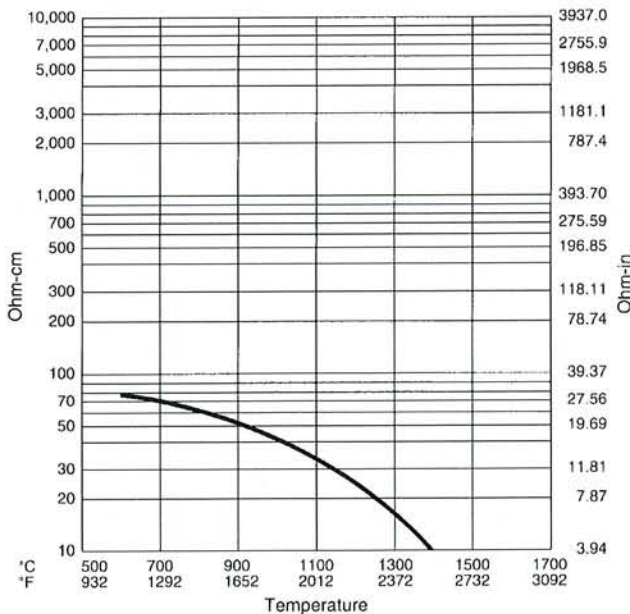
Typical Thermal Conductivity



Typical Thermal Expansion¹ (Refractoriness Under Load)



Typical Electrical Resistivity



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