

Valcor® Fired Refractory Shapes

Datasheet Code US: 1-14-20



Product Description

The Valcor fired refractory shapes offering, manufactured by the Thermal Ceramics business has a proven track record in molten glass contact applications. The shapes are engineered to meet precise customer specifications and are individually inspected.

Two compositions are available:

- Valcor G (high-alumina mix)
- Valcor G-AZ (AZS premium grade)

Features

- Decades of proven performance in molten glass contact applications
- Very smooth surface finish
- Individual part inspection
- Hundreds of standard molds in inventory

Applications

- Consumable molten glass contact refractory shapes:
 - stirrers
 - plungers
 - spouts
 - feeder tubes
 - skimmer blocks
- Burner blocks

Valcor® Fired Refractory Shapes

Physical Properties	G	G-AZ
Color	White	White
Bulk Density, pcf (kg/m ³)	179 (2868)	190 (3045)
Melting point, °F (°C)	3560 (1960)	3200 (1760)
Apparent Porosity, %	17	17
Permeability, ft ³ /hr•ft ² •in.,psi (Mpa)	4	4
Hot Modulus of Rupture, psi (Mpa)		
@ 75°F (-18°C)	1600 (11)	3000 (21)
@ 2300°F (1260°C)	1600 (11)	3000 (21)
@ 2600°F (1427°C)	900 (6.2)	2300 (16)
@ 2800°F (1538°C)	700 (4.8)	1400 (9.7)
Permanent Linear Change, %		
5 hours @ 3000°F (1649°C)	–	-0.4
5 hours @ 3200°F (1760°C)	-1.9	–
Deformation Under Hot Load, % @ 25 psi (0.17 Mpa)		
1½ hr @ 2640°F (1448°C)	3.6	0.2
Coefficient of thermal expansion, in./in.°F	4.7 x 10 ⁻⁶	3.4 x 10 ⁻⁶
Chemical Analysis, % weight basis after firing		
Alumina, Al ₂ O ₃	93	64
Silica, SiO ₂	5	12
Zirconia, ZrO ₂	-	23
Ferric oxide, Fe ₂ O ₃	0.5	0.2
Titanium oxide, TiO ₂	0.7	0.1
Magnesium oxide, MgO	trace	
Alkalies, as NaO ₂	0.2	

The values given herein are 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. Therefore, the data contained herein should not be used for specification purposes. Check with your Morgan Thermal Ceramics office to obtain current information.