

## Zircar Ceramics DAHP Dense Alumina Hearth Plate

Category : Ceramic , Oxide , Aluminum Oxide

### Material Notes:

ZIRCAR Dense Alumina Hearth Plates are used for supporting loads in high temperature furnaces and other thermal process systems. These dense plates are made of fully sintered fine grain high purity alumina. Designed for use as high load bearing members, they exhibit high strength at operating temperatures as high as 3400°F (1870°C). They are of exceptional high purity and contain only a trace of tramp oxides. Typical Applications: Load bearing members in furnaces and thermal process systems operating as high as 3400°F (1870°C). Hearth plates in rapid cycle furnaces with air atmospheres operating to 3317°F (1825°C). Support plates in furnaces with hydrogen atmospheres operating over 3100°F (1700°C). High temperature setters, supports and process fixtures. Information provided by Zircar Ceramics.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Zircar-Ceramics-DAHP-Dense-Alumina-Hearth-Plate.php](http://www.lookpolymers.com/polymer_Zircar-Ceramics-DAHP-Dense-Alumina-Hearth-Plate.php)

Physical Properties	Metric	English	Comments
Bulk Density	3.20 g/cc	0.116 lb/in <sup>3</sup>	
Porosity	20 %	20 %	Apparent
Permeability	0.000035 - 0.000070	0.000035 - 0.000070	g/s.Pa.m

Mechanical Properties	Metric	English	Comments
Modulus of Elasticity	85.0 GPa	12300 ksi	
Modulus of Rupture	0.00689 GPa	1.00 ksi	
	@Temperature 1450 °C	@Temperature 2640 °F	
	0.0124 GPa	1.80 ksi	
	@Temperature 1250 °C	@Temperature 2280 °F	
	0.0193 GPa	2.80 ksi	
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Compressive Strength	75.8 MPa	11000 psi	Crushing

Thermal Properties	Metric	English	Comments
CTE, linear	8.40 μm/m-°C	4.67 μin/in-°F	30 - 1500°C
Specific Heat Capacity	1.13 J/g-°C	0.270 BTU/lb-°F	
Thermal Conductivity	2.30 W/m-K	16.0 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 1200 °C	@Temperature 2190 °F	

Optical Properties	Metric	English	Comments
Emissivity (0-1)	0.28	0.28	
	@Temperature 1100 °C	@Temperature 2010 °F	
	0.38	0.38	
	@Temperature 1500 °C	@Temperature 2730 °F	
	0.42	0.42	
	@Temperature 500 °C	@Temperature 932 °F	

Component Elements Properties	Metric	English	Comments
Al2O3	99.55 %	99.55 %	
Fe2O3	0.090 %	0.090 %	
K2O+Na2O	0.25 %	0.25 %	
Other	0.040 %	0.040 %	Other Oxides
SiO2	0.070 %	0.070 %	

## Contact Songhan Plastic Technology Co.,Ltd.

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