

## Thermal Ceramics TR-20 Block Insulation

Category : Ceramic , Oxide , Silicon Oxide

### Material Notes:

TR-20 Block is a superior, high-temperature insulation for service to 2000°F (1095°C). According to ASTM testing procedures, TR-20 exhibits extremely high resistance to breakage to 2000°F (1095°C). Long, maintenance-free service and maximum operating efficiency is assured by TR-20's unique combination of low conductivity and high stability. TR-20 is also very low in sulfur and iron, making it highly resistant to attack from atmospheric conditions and greatly reducing the possibility of product contamination. These products can be manufactured in special shapes to fit. Features: Low thermal conductivity Block construction 36" x 12" Good high temperature strength Variety of thicknesses up to 7" Resistant to cryolite vapors Applications: Side and end wall insulating material in carbon baking pits Backup insulation in aluminum pot cells, reheat and pusher furnaces, copper reverberatory furnaces, and oil-fired water tube boilers Curved Block Interior and exterior use on bustle pipes, hot air pipes, stacks and other curved or circular equipment customer specifications, saving money on both installation and energy costs. Information provided by Thermal Ceramics Data has not been recently verified. Please contact manufacturer for current information.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Thermal-Ceramics-TR-20-Block-Insulation.php](http://www.lookpolymers.com/polymer_Thermal-Ceramics-TR-20-Block-Insulation.php)

Physical Properties	Metric	English	Comments
Density	0.4245 g/cc	0.01534 lb/in <sup>3</sup>	at ambient temperature; ASTM C303
	0.4806 g/cc @Temperature 1090 °C	0.01736 lb/in <sup>3</sup> @Temperature 2000 °F	ASTM C303
Loss On Ignition	9.5 %	9.5 %	
Porosity	91 %	91 %	ASTM C493

Mechanical Properties	Metric	English	Comments
Modulus of Rupture	0.000814 GPa	0.118 ksi	at ambient temperature; ASTM C203
	0.00149 GPa @Temperature 1090 °C	0.216 ksi @Temperature 2000 °F	ASTM C203
Compressive Strength	1.66 MPa	240 psi	at ambient temperature; ASTM C165
	2.69 MPa @Temperature 1090 °C	390 psi @Temperature 2000 °F	ASTM C165

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	1.01 J/g-°C	0.241 BTU/lb-°F	
Thermal Conductivity	0.0900 W/m-K	0.625 BTU-in/hr-ft <sup>2</sup> -°F	

Thermal Properties	@Temperature 204 °C Metric	@Temperature 399 °F English	Comments
	0.100 W/m-K	0.694 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 316 °C	@Temperature 601 °F	
	0.110 W/m-K	0.763 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 426 °C	@Temperature 799 °F	
	0.120 W/m-K	0.833 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 540 °C	@Temperature 1000 °F	
	0.120 W/m-K	0.833 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 649 °C	@Temperature 1200 °F	
	0.140 W/m-K	0.972 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 746 °C	@Temperature 1370 °F	
	0.150 W/m-K	1.04 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 856 °C	@Temperature 1570 °F	
Maximum Service Temperature, Air	1090 °C	2000 °F	Continuous
Shrinkage	4.00 %	4.00 %	Linear; ASTM C356
	@Temperature 1090 °C	@Temperature 2000 °F	

Component Elements Properties	Metric	English	Comments
Al <sub>2</sub> O <sub>3</sub>	3.8 %	3.8 %	
Alkalis	1.3 %	1.3 %	
CaO	10 %	10 %	
Fe <sub>2</sub> O <sub>3</sub>	1.4 %	1.4 %	
MgO	0.70 %	0.70 %	
SiO <sub>2</sub>	73 %	73 %	
TiO <sub>2</sub>	0.20 %	0.20 %	

## Contact Songhan Plastic Technology Co.,Ltd.

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