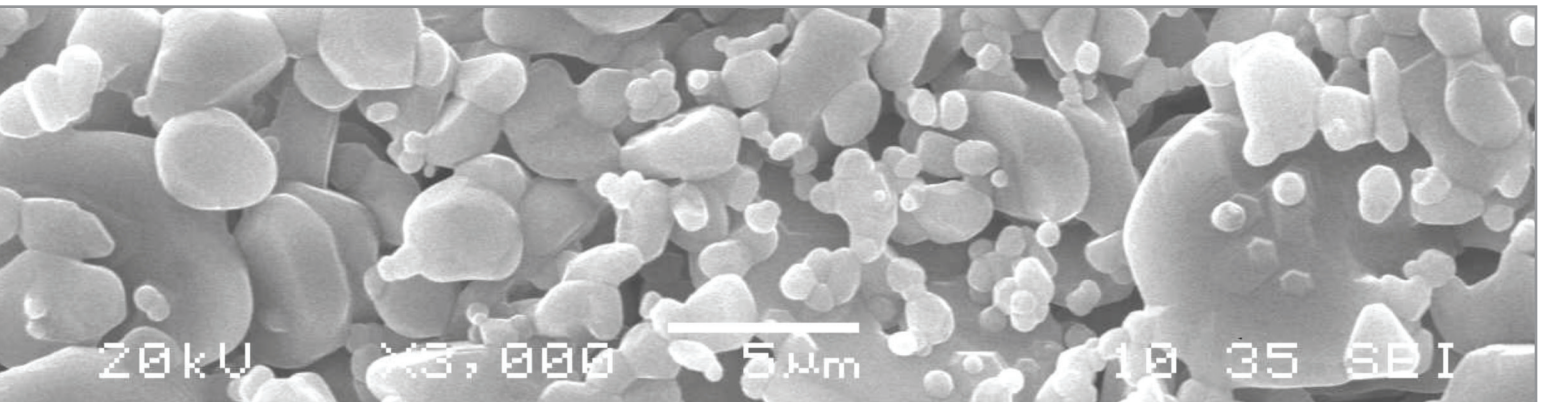


HIGH TEMPERATURE OPEN CELL POROUS CERAMICS (HTOCPC)

Superior Technical Ceramics HTOCPC are designed to produce specialty ceramic components with open porosity tailored to generate pore sizes from 0.05 to 150+ microns. Corresponding porosity range of 10%-55% may be expected.



PRODUCT CHARACTERISTICS

The room temperature flexural strengths can range from 4000 psi to 20,000 psi. These porous materials have been designed for both acid and base resistance along with high temperature use up to 2750°F / 1500°C. The end users can expect stable performance without pore closure or degradation of the pore network at these elevated temperatures.

The primary materials of choice are Alumina, Zirconia (both Magnesium and Yttrium stabilized), Zirconia Toughened Alumina and Alumina / Mullite Refractory. Non oxide compositions of Silicon Nitride and coarse Silicon and fine grained Silicon Carbide are also being explored.

The pore structure of a particular Alumina HTOCPC is shown above.

The current component shapes that can be manufactured range from discs and plates to rods and tubes. The forming technology to manufacture these porous bodies can range from mechanical pressing, isostatic pressing and extrusion to wet pressing and some slip casting. These bodies can be green machined prior to sintering and hard machined post firing to more exacting tolerance requirements.

(Please see reverse for specifications.)



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HTOCPC SPECIFICATIONS

HTOCPC have a wide range of uses in manufacturing across industries such as medical, mining, oil and gas, alternative energy, emissions control, metal refinement, chemical processing, pharmaceutical, printing, wine making and other industries.

Other applications where this technology could be further utilized are as follows:

Molten Metal Filtration	Paper and Pulp
Gaseous Filtration	Petroleum
Fluid Filtrations	Semiconductor Fabrication
Corrosive Environments	Advanced Battery Construction
Sensors	

Superior Technical Ceramics HTOCPC compositions under development include the following profiles of porosity, pore size and approximate expected strengths at RT.

A1	AZ	AG90	AG54	AG24
45-55%	45-55%	35 – 40%	35 – 40%	30 - 35%
0.050-0.50µ	0.05-0.50 µ	14-74 µ	27-74 µ	62-115 µ
4500 psi	20,000 psi	3500psi	2500psi	1500psi

CONTACT US

For more information call or email us.
You can also learn more about our extensive capabilities at www.ceramics.net.

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