



ALUCEL™ Casting

FULLY SINTERED "SELF-BONDED" CERAMIC FILTERS FOR NON-FERROUS FOUNDRIES

The quality and reliability of Hi-Tech Ceramic's Alucel™ filters has been well proven with over 10 years of experience in primary aluminum casting operations.

Now this high purity, high strength filter is available in the sizes and pore sizes required for non-ferrous foundries.

Alucel's™ advantages include a fully sintered structure which is innately stronger and more chemically and thermally resistant than other commercially available alternatives. Hi-Tech also can provide a patented edgecoat which enhances the strength and sealing capability of the filters.

The advantages of the fully sintered Alucel™ filters have been demonstrated by fellow foundrymen. They have found casting integrity greatly improved by using Hi-Tech Ceramic's Alucel™ filters. "Oxides have been virtually eliminated and are no longer an issue." "We have found no filter contamination or breakdown. The edgecoat eliminates friable edges and allows no metal by-pass."

Standard Sizes and Pore Sizes

2" O.D. x 7/8"	1.5" x 1.5" x 7/8"	3" x 3" x 7/8"
3" O.D. x 7/8"	2" x 2" x 7/8"	3" x 4" x 7/8"
4" O.D. x 7/8"	2" x 3" x 7/8"	4" x 4" x 7/8"

Standard pore sizes include 10, 15, 20 and 30 ppi. Other part sizes and pore sizes are readily available with short lead times.

Standard Tolerances are +0, -1/8".

Physical and Mechanical Properties

Pore Size (PPI)*	Density (g/cm ³)	Thermal ** Shock (g)	Modulus of *** Rupture (psi)	Compressive**** Strength (psi)
10	0.69	0.09±0.03	332±34	354±69
15	0.69	0.07±0.03	334±68	289±88
20	0.69	0.07±0.03	346±91	302±81
30	0.69	0.07±0.03	428±88	220±52

* PPI = pores per linear inch

** Thermal Shock Resistance = Weight loss of 3" O.D. x 1" sample after 2 repetitions of rapid heating to 1950°F for 30s, cooling to room temperature for 30s

***3 point bend test on 1" x 1" x 8" bars

****Compressive strength of 2" O.D. x 1.5" samples

ALUCEL™ FILTERS

- Remove Inclusions
- Reduce Trapped Gas
- Provide Laminar Flow



IMPROVED CASTING QUALITY

- Enhanced Surface Finish
- Improved Machining Properties
- Reduced Scrap and Rework
- Improved Profitability