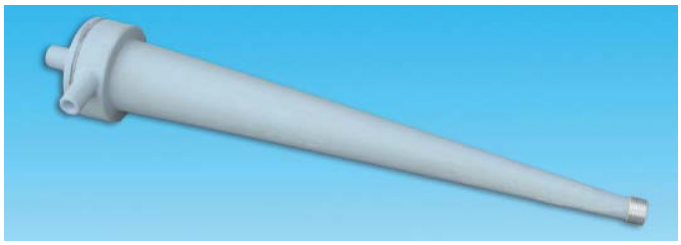
CERAMIC CENTRICLONE

Centriclones made of Technical Ceramics make your separation processes more efficient.

Even under extraordinary conditions of abrasion, chemical attacks or hot temperature, they are resistant. This long-term durability is achieved by extreme hardness as well as chemical and heat resistance of the special ceramic material.



Properties			Dimension	Value
Structural	Main Components		-	Quartz + Mullite + Corundum
	Content of Main Components		wt %	44 + 37 + 17
	Apparent Density		g/cm^3	2.60
	Tightness	Rate of He-Leackage	mbar * l / s	> 10^{-7}
Mechanical	Characteristical Bending Strength	4 Point according to DIN EN 843-1[1)]	MPa	63
	Weibull-Modulus		-	> 10
	Fracture Toughness K_{IC}	SEVNB	MPa * m$^{1/2}$	1.2
	Young's Modulus		GPa	64
	Poisson's Ratio		-	0.08
Topographical	Achievable Value of R_a by use of Lapping		m	0.80
Thermal	Maximun Service Temperature		°C	1000
	Coefficient of Thermal Expansion	20 - 100 °C	10^{-6} / K	4.14
		20 - 200 °C	10^{-6} / K	4.82
		20 - 400 °C	10^{-6} / K	5.32
		20 - 600 °C	10^{-6} / K	5.77
		20 - 800 °C	10^{-6} / K	5.90
		20 - 1000 °C	10^{-6} / K	6.33
	Average Resistance to Thermal Shock[2)]		K	175
Electrical	Dielectric Sonstant		-	5.6

[1)] 30 bars with dimensions 3 x 4 x 50 mm^3
[2)] Samples: 5 tiles with dimensions 90 x 90 x 9 mm^3; quenching in ice water

Properties	Samples and Conditions of Tests	Dimension	Value
Cold Compression Strength	2 Cylinders with diameter and height = 50 mm	MPa	410
Hot Bending Strength	6 bars with dimension 25 x 25 x 150 mm^3. Measurement according to DIN EN 993-7 under 3 - point load in air. Temperature = 1050 °C	MPa	40
Softening under Load	Determination according to DIN EN 993-8 by measuring the change of height of a cylinder with diameter and height = 50 mm loaded by 0.2 MPa during heating up to > 1000 °C in air. The starting point of softening is the turning point of the thermal expansion's curve.	°C	1050
Creep under Compression	Determination according to DIN EN 993-9 by measuring the change of height of a cylinder with diameter and height = 50 mm loaded by 0.2 MPa during a 25 h lasting annealing at 1050 °C in air. The result of that measurement indicates the time dependent change of shape.	ppm/h	10
Resistance to Thermal Shock	Determination according to DIN 51068-1 by use of 3 cylinders with diameter and height = 50 mm. Heat up to 950 °C in air and quench in ice water. Observation of first cracks after x cycles.	Number of Cycles	2

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