물리적 특성
Physical Properties

		기밀질 세라믹(Impervious materials)				다공질 세라믹(Porous materials)					
	Dimension	Alsint 99.7	Pythagoras 1800Z	Pytha goras	Halsic-1	Sillmantin 60NG	Sillmantin 65	Sillmantin 60	Sillmantin KS	SiC Claybondsd *****	Halsic-R
알루미나 함량 Al_2O_3 content	%	99.7	76	60	SiC/Si content 90/10	73-75	78-80	73-75	70	SiC content 70-90	SiC content ≥99
알카리 함량 Alkali content	%	0.05	0.3	3.0	–	–	–	–	–	–	–
DIN 규격 Type acc. to DIN VDE 0335		799	–	610	–	–	–	530	–	–	=
흡수율 Water absorption	%	≤0.2	≤0.2	≤0.2	≤0.2	5	5	12	12	10	5
배기율 Leakage rate at 20℃(Helium)	$hPa.dm^3.s^{-1}$	10^{-10}	–	10^{-9}	–	–	–	–	–	–	–
밀도 Density	$g.cm^{-3}$	3.80-3.93	3.10	2.60	3.00-3.10	2.65	2.60	2.35	2.35	2.40	2.60-2.70
굴곡강도 Flexural strength	Mpa	300	150	120	230	50	45	35	30	30	90-100
경도 Hardness (Mohs scale)		9	8	8	–	–	–	–	–	–	–
열팽창율 20-700℃ Thermal expansion 20-1000℃	10^{-6} grd^{-1}	7.8 8.6	5.6 6.0	5.4 6.0	3.7 4.3	5.2 5.7	6.1	5.3 5.7	5.3 5.7	5.0 5.0	3.9 4.5
열전도율 Thermal conductivity	$W.m^{-1}.k^{-1}$	26.0	3.5	2.0	90.0	–	–	1.4	1.4	28.0	30.0
최고사용온도 Max. working temperature**	℃	1700	1600	1500	1350***	1650	1400	1350	1350	400	1600*** <2000****
전기절연도 Dielectric strength(related to 1.5mm wall thickness)	$kV.mm^{-1}$	17	15	17	–	–	–	–	–	–	–
저항계수 Volume resistivity D.C. at 20℃	$\Omega.cm$	10^{14}	10^{16}	10^{13}	–	–	–	–	–	–	–
열충격도 Thermal shock resistance		good	very good	good	very good	good	very good	very good	very good	very good	very good
기공크기 Diameter of pores approx.	μm	–	–	–	–	8-9	1	2	2	6	21-27

★ The physical properties of our products stated above are only valid for test specimens. the transfer of these values to other forms and dimensions is true only up to a point. In practice alsint 99.7 samples p.e. have a flexural strength between 160 and 300 Mpa. depending on wall thickness, geometry, surface finish, aftertreatment and manufacturing process.

★★ depending on applied load: for tube materials determination according to DIN 43724/DIN 43725.

★★★ In oxdizing atmosphere.

★★★★ under protective atmosphere/vacuum.

★★★★★ properties for general information becauses of different qualities.