ALUCER®

Technical sheet

Al_2O_3 Alumina Properties			ALUCER®97	ALUCER®99.7	Unit
Physical	Purity		97%	99.7%	% Al_2O_3
	Crystal size		9,3	3,2	µm
	Fired density		3,81	3,94	$g.cm^{-3}$
	Open porosity		0%	0%	-
Mechanical	Compression strength		1900	2300	MPa
	Flexural strength (3 points)		290	340	MPa
	Elasticity modulus (Young)		340	380	GPa
Thermal	Coefficient of Thermal Expansion (CTE)	20°C à 100°C	7,0	7,2	$10^{-6}.°C^{-1}$
		20°C à 300°C	7,1	7,4	
		20°C à 600°C	7,5	7,8	
		20°C à 1000°C	8,2	8,4	
	Thermal conductivity	20°C à 1000°C	13,4	14,1	$W.mK^{-1}$
Electrical	Tranversal resistivity (500 V)	20°C	$1,4.10^{14}$	$1,6.10^{14}$	Ω.m
		100°C	$9,6.10^{13}$	$7,8.10^{13}$	
		300°C	$1,1.10^{13}$	$2,2.10^{12}$	
	Dielectric breakdown strength	20°C, 50Hz	15,5	16,1	$Kv_{eff}.mm^{-1}$
	Dissipation factor (20°C, 20V)	50Hz	2,4	2,7	10^{-3}
		1kHz	4,0	4,1	
		1MHz	2,5	3,7	
	Relative permittivity (20°C, 20V)	50Hz	8,8	9,0	-
		1kHz	8,9	9,1	
		1MHz	8,8	9,0	

Values are based on testing in SCT Ceramics lab. Values are not guaranteed and should be used as guidance only.