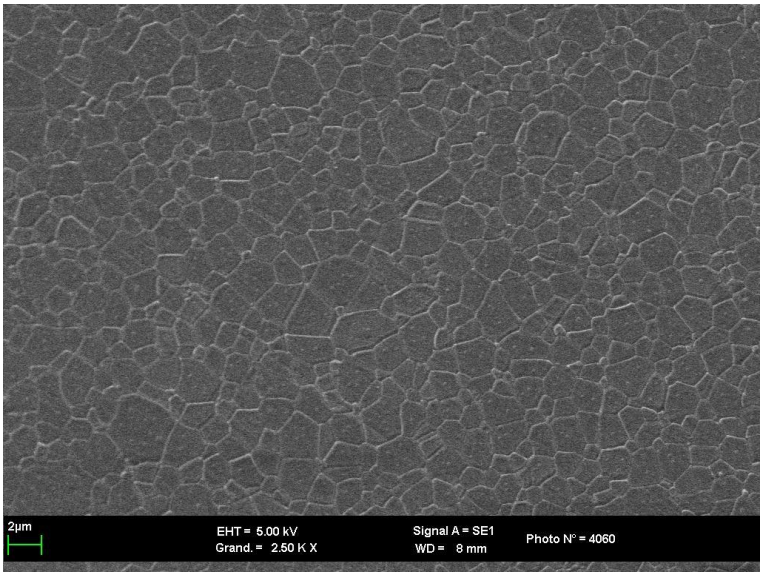
ceramaret Switzerland

Alumina 99.9%

CHEMICAL COMPOSITION	Al_2O_3	99.9%wt	* by difference
	MgO	0.05%wt	
	Na_2O	<25 ppm	
	SiO_2	<25 ppm	
	Fe_2O_3	<25 ppm	
	CaO	<25 ppm	
PHYSICAL PROPERTIES	Mean grain size	3±1 µm	
	Sintered density	3.95 g/cm^3	
	Bending strength at 20° C	500 MPa	
	Hardness $H_{v0.5}$	1900 Hv	
THERMAL PROPERTIES	Thermal conductivity at 20°C	30 W.m^{-1}.k^{-1}	
ELECTRICAL PROPERTIES	Dielectric constant at 25°C-1MHz	9 (1MHz)	
	tan δ	5.10^{-3} (9GHz)	
	DC Volume resistivity at 25°C	5.10^{14} Ω.cm	
	Dielectric strength at 3mm	19 kV/mm^{-1}	

MICROSTRUCTURE



KEY FEATURES

Superior mechanical strength and hardness
Biocompatible
Smooth surfaces

TYPICAL APPLICATIONS

High purity alumina is usually well suited for applications such as pistons and cylinders for precision dosing devices, feedthrough for medical devices, precision rotor valves components, pump seals & plungers, electrical insulators & inductors, weear nozzles, electrical connector housings, injector tubes & gas nozzles, wear resistant components.