

ATZ 80%3Y-TZP-20%Al₂O₃

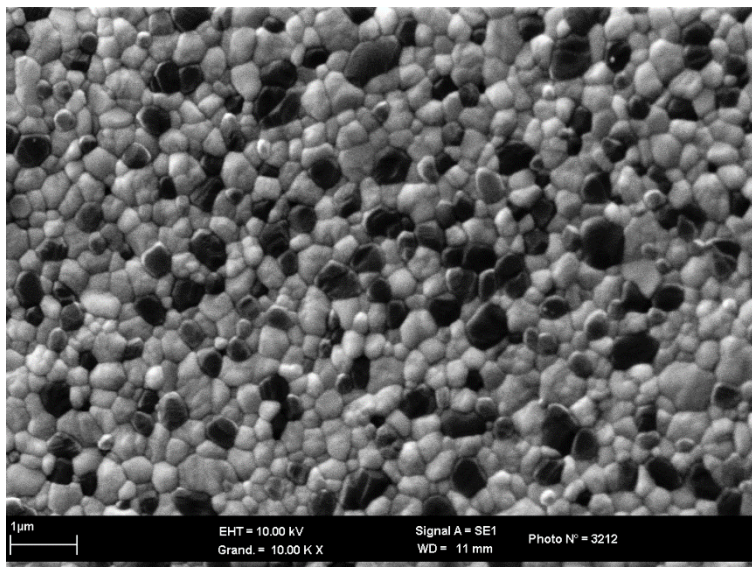
CHEMICAL COMPOSITION	3Y-TZP	80%wt	* by difference
	Al ₂ O ₃	20%wt	
	SiO ₂	<0.02	
	Fe ₂ O ₃	<0.01	

PHYSICAL PROPERTIES	Mean grain size	0.5±0.1 μm
	Sintered density	5.4 g/cm ³
	Bending strength at 20° C	1000 MPa
	Hardness H _{v0.5}	1400 Hv

THERMAL PROPERTIES	Thermal conductivity at 20°C	10 W.m ⁻¹ .k ⁻¹
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ELECTRICAL PROPERTIES	Dielectric constant at 25°C-1MHz	-
	tan δ	-
	DC Volume resistivity at 25°C	-
	Dielectric strength at 3mm	-

MICROSTRUCTURE



KEY FEATURES	High mechanical strength and hardness
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TYPICAL APPLICATIONS	Hip joint implants, surgical instruments, thermal insulators in resectoscopy, pump components, wear resistant components, valve seals, bushings, cutting tool inserts, welding jigs and fixtures, dental implants, orthopaedic prosthetics, cutting tools, thread guides, bearings, nozzles, filling pumps, ball valves.
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