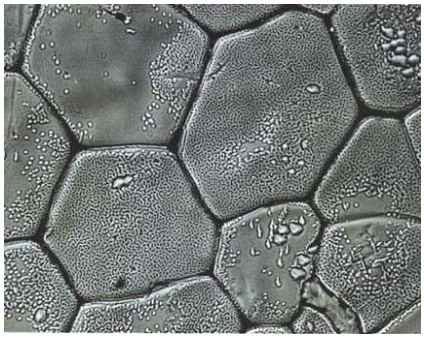
nanoker

CERAMIC TECHNICAL DATA SHEET

KZM

MgO partially stabilized zirconia



Typical microstructure

Main properties

· High thermal shock resistance
· Very low thermal conductivity
· Corrosion resistance to molten metals
· High wear resistance under sliding and abrasive conditions

Applications

· Hot extruding dies
· Oil field supply
· Valve trim
· Rollers for kilns (T<1000ºC)

Physical properties		
Parameters	Units	Value
Density	g/cm^3	5.6
Flexural Strength	MPa	650
Fracture toughness	$MPa \cdot \sqrt{m}$	9.0
Hardness	GPa	10.5
Young Modulus	GPa	210
Thermal conductivity	W/m·k	3
Thermal Expansion Coefficient (20-1000ºC)	$10^{-6}K^{-1}$	7.5
Maximum working temperature	ºC	1000
Electrical resistivity	Ω·cm	$>10^{11}$

*All properties measured at 20ºC unless otherwise stated

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