sandoz
swiss precision spheres

ZIRCONIA TOUGHENED ALUMINA

(INTERNAL ALUZIR) MATERIAL: ZTA-10 ROHS & REACH COMPLIANT

Physical properties

DENSITY	4.13 g/cm^3
COMPOSITION MAIN	Al_2O_3 90 % + ZrO_2 10 %
COLOUR	white
GRAIN SIZE	Al 0.70 um, Zr 0.25 um
MAX WORKING TEMPERATURE	1500 °C

Thermal properties

SPECIFIC HEAT	900j/kg .°K (at 100°C)
CONDUCTIVITY	20 W/m.K (at 20°C)
EXPANSION	8 10^{-6}/°C
SHOCK RESISTANCE	

Mechanical properties

HARDNESS (DURETÉ)	1800 kg/cm^2 (Vickers)
POISSON'S RATIO	0.25
MODULUS OF RUPTURE	5 tonnes/cm^2 ou 2500 MPa
YOUNG'S MODULUS (ÉLASTICITÉ)	3 tonnes/cm^2 ou 380 GPa
COMPRESSIVE STRENGHT (RÉSISTANCE À LA COMPRESSION)	20 tonnes/cm^2 ou 2000MPa
TENSILE STRENGTH (RÉSISTANCE À LA TENSION)	3 tonnes/cm^2 ou 300MPa

Chemical properties

ACID RESISTANCE LOSS	mg/l
ALKALI RESISTANCE LOSS	mg/l
WATER RESISTANCE LOSS	mg/g