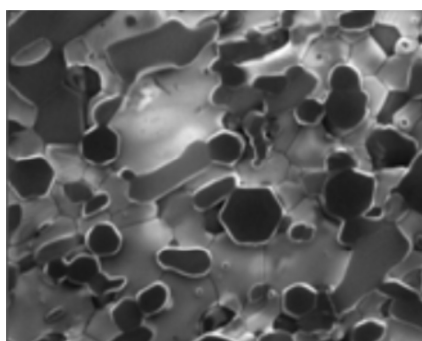




KA-EDM

Electroconductive Alumina Composite



Typical microstructure

Main properties

- Very high hardness
- Excellent trade-off strength/toughness
- High thermal conductivity
- Ra < 0.1 μm after mirror polishing
- Machinable by EDM (electro-discharge machining)

Applications

- Cutting tools
- Wear resistant tools for stamping
- Cold drawing dies

Physical properties

Parameters	Units	Value
Density	g/cm ³	4.2
Flexural Strength	MPa	850
Hardness	GPa	22.5
Fracture toughness	MPa·√m	8.0
Young Modulus	GPa	370
Thermal conductivity	W/m·k	35
Thermal Expansion Coefficient (20-900°C)	10 ⁻⁶ K ⁻¹	8.0
Maximum working temperature	°C	1000
Electrical resistivity	Ω·cm	3.1·10 ⁻⁵

* All properties measured at 20°C unless otherwise stated