keratec
ADVANCED CERAMIC MATERIALS

EXTRUSION DIES

- Longer tool life
- Better dimensional control
- Less downtime (less maintenance)
- Improved surface finish

MAIN USES

Nanoker manufactures ceramic extrusion dies for the non-ferrous metals forming industry (copper, brass, nickel). They can be used for bars, tubes or profile extrusion.

MATERIALS

KZM: Magnesia partially-stabilized zirconia (ZrO2-MgO) for hot extrusion and KZY-1000: Yttria partially-stabilized zirconia (Y-TZP) for cold extrusion.

Zirconia based materials are hard, chemically inert, stable at high temperatures and resistant to corrosion, wear and thermal shock. These properties alongside an appropriate use allow our extrusion dies to outperform traditional steel as well as high strength MHC dies.

FORMATS

Nanoker makes round dies but can also produce them in different shapes (oval, square, rectangular, hexagonal). The minimum and maximum dimensions we can offer correspond to an inner diameter of 2 mm and an outer diameter of 120 mm, respectively. We are at disposal of the customers to understand their needs and provide the best possible solution.

For more details of products and services or to specifically discuss your needs, please contact our technical department.

Properties	KZM	KZY-1000
Density (g/cm^3)	5,6	6,02
Porosity (%)	0	0
Flexural strength (MPa)		
20ºC	620	1000
800ºC	322	360
Thermal exp. coef. (x10^{-6}/ºC)		
0°C - 1.000°C	9	11
Thermal conductivity (W/mºK)		
500ºC	2,1	2

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