

## Product Datasheet - Tokarec

TOKAREC has a high thermal conductivity, a low coefficient of thermal expansion and high strength to weight ratio, which makes it an ideal material for high temperature applications.

Originally developed for high performance aircraft and space vehicles, TOKAREC has some unique properties that make it suitable for use in a wide variety of industries. TOKAREC parts are found in vacuum furnaces, chemical reactors, silicon wafer processes and a host of other industrial applications. In particular, furnace charging systems made in TOKAREC, not metal, reduce the size of the fixtures which, in turn, leads to increases in productivity. The high strength gives added protection to areas of the furnace vulnerable to mechanical wear while the low expansion rate means low deformation of parts during heating and cooling.

### Features:

- High Specific Strength and High Specific Modulus
- Low Coefficient of Thermal Expansion
- Low Thermal Conductivity
- High Purity
- Low Strength to Weight Ratio
- Excellent Heat and Thermal Shock Resistance
- Strength increases with Increasing Temperature

### Applications:

- Components for single and multi-Crystal Pullers
- Heaters
- Jigs and Fixtures
- Carriers for Silicon Solar Cells
- Structural Furnace Parts

Property	Unit	CC26NF	CC27MFP	CC28MF	CC28NF
		6K Cylinder	12K Crucible	12K Plates	6k Plates
Apparent Density	g/cm <sup>3</sup>	1.4	1.62	1.48	1.48
Flexural Strength	MPa	100	170	110	140
Tensile Strength	MPa	100	150	100	100
C.T.E.(450 <sup>o</sup> C)	×10 <sup>-6</sup> /K	0.8	0.8	0.8	0.8
Thermal Conductivity	W/mK	2.6	8	2.8	2.8
Specific Resistance	μΩm	28	22	26	26