

# Cermatec™

## Ceramic Matrix Technology



Boulden Cermatec™ is a composite material with carbon fibers in a silicon carbide ceramic matrix. It can withstand continuous process temperatures up to 800°C (1470°F). Cermatec™ offers thermal shock resistance and impact resistance beyond traditional ceramic or carbon-based materials. It can be used in clean or abrasive services across a broad range of chemicals.

Examples of where Cermatec™ can be used:

- Mag-drive pump bearings
- Canned motor pump bearings
- Product-lubricated thrust bearings
- Product-lubricated screw pump bearings
- Gear pump idler bushings
- Centrifugal pump wear rings and throttle bushings
- Vertical pump shaft bearings

### Cermatec™ CMT 211 Physical Properties

Property	Unit of Measure	Typical Value
Density	lb/in <sup>3</sup>	0.072
Flexural Strength (4 pt bend)	ksi	35 - 42
Elastic Modulus	psi	11.8 x 10 <sup>6</sup>
Tensile Strength	ksi	35 - 40
Compressive Strength	ksi	63
Thermal Conductivity - Radial	BTU-in/hr-ft <sup>2</sup> °F	14
Thermal Conductivity - Axial	BTU-in/hr-ft <sup>2</sup> °F	70
Coefficient of Thermal Expansion - Radial	10 <sup>-6</sup> in/in-°F	0.78
Coefficient of Thermal Expansion - Axial	10 <sup>-6</sup> in/in-°F	0.94

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