

Corguard® (ZAC) is a combination of alumina, zirconia, and silica that has been electrically melted and fused, just like steel. The similarity to steel ends there, because Corguard® outlasts steel and other traditional wear materials many times over. Our fusion-casting process creates an interlocking crystalline structure that is resistant to heavy impact, sliding abrasive wear, and

thermal shock. The dense, impervious structure and chemical composition of Corguard® give it outstanding resistance to corrosion by acids, solvents, slags, and many molten salts.

To learn more about our high performance Corguard® family of products, please contact your Saint-Gobain WRT representative.

Properties		SI Units	English units
Chemical Analysis			
Alumina		50%	50%
Zirconia		34%	34%
Silica		15%	15%
Bulk Density		3.49 g/cm ³	218 lbs./ft. ³
Young's Modulus (E)	20 °C	110 GPa	34 × 10 ⁶ psi
Vickers Hardness	20 °C	19.6 GPa	2.8 × 10 ⁶ psi
Modulus of Rupture	RT	109 MPa	15.9 × 10 ³ psi
	1100 °C	23.3 MPa	3.38 × 10 ³ psi
	1200 °C	7.94 MPa	1.15 × 10 ³ psi
	1300 °C	5.18 MPa	752 psi
	1400 °C	2.35 MPa	341 psi
Cold Crushing Strength		563 MPa	81.6 × 10 ³ psi
Maximum Use Temperature		1,650 °C	3,000 °F
Apparent Porosity		1.15%	1.15%

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PERFORMANCE CERAMICS & REFRACTORIES