



TITANIUM DIBORIDE TECHNICAL DATA

Material properties	Norm	Symbol/Unit	Titanium Diboride
Density	DIN EN 623-2	ρ [g/cm ³]	> 4.50
Porosity	DIN EN 623-2	P [%]	< 1.5
Knoop hardness	DIN EN 843-4	HK 0.1 [GPa]	25.6
Young's modulus	DIN EN 843-2	E [GPa]	575
Flexural strength, 4-pt bending	DIN EN 843-1	σ_B [MPa]	500
Weibull modulus	DIN EN 843-5	m	16
Poisson ratio		ν	0.11
K_{Ic} (SENB)		K_{Ic} [MPa·m ^{0.5}]	8.0
Coefficient of thermal expansion	DIN EN 821-1		
20 °C - 500 °C		α [10 ⁻⁶ /K]	6.7
500 °C - 1000 °C		α [10 ⁻⁶ /K]	8.2
Thermal conductivity	DIN EN 821-2		
at 50 °C		λ [W/m K]	54
Specific electrical resistance at 20 °C		ρ [Ω cm]	2·10 ⁻⁵

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