

Material group	Steel	Ceramics (silicon nitride)		Titanium
Short name	X 50 Cr Mn Ni Nb N 21 9	Si ₃ N ₄		Ti-6Al-2Sn-4 Zr-2Mo
		CFI-N3208 gas press. sintered	CFI-N7202 normal press. sintered	310 50
Physical properties:				
Density in g/cm³	7.9	3.23	3.22	4.54
Thermal conductivity in W/(m K)	14.7	25	22	6.9
Average thermal expansion - coefficient in 1/K	19 x 10 ⁻⁶ bei 20 - 800 °C	3.2 x 10 ⁻⁶	3.4 x 10 ⁻⁶	8.6 x 10 ⁻⁶ bei 21 - 205 °C
		bei 20 - 1000 °C		
Resistances:				
E-module in kN/mm²	200	320	310	114
Tensile strength in N/mm²	≥ 950			1350
0,2 % yield strength in N/mm²	580			1226
Flexural strength in N/mm²	950	920	800	950
Fracture toughness in MNm ^{-3/2}	100	6.5	6.8	