

PCD grade: CTX002

Precision machining and finishing

Physical and metallurgical properties

Property	Measurement	Applicable standard
Transverse rupture strength characteristic strength (MPa)	2175	ASTM C1239
Weibull modulus	7.1	
Fracture toughness mean (MPa.m ^{1/2})	9.12	Shetty et al. (1995)
Elastic modulus (GPa)	950	ASTM E494
Poisson's ratio	0.1	
Density (g/cm ³)	4.36	Archimedes principle
Thermal conductivity (W/m/K) at 500°C	304.3	Calculated from thermal diffusivity, specific heat capacity and density
Knoop hardness (Indentation)(GPa)	45	ASTM C1326-03

Diamond grain size (µm)

~2

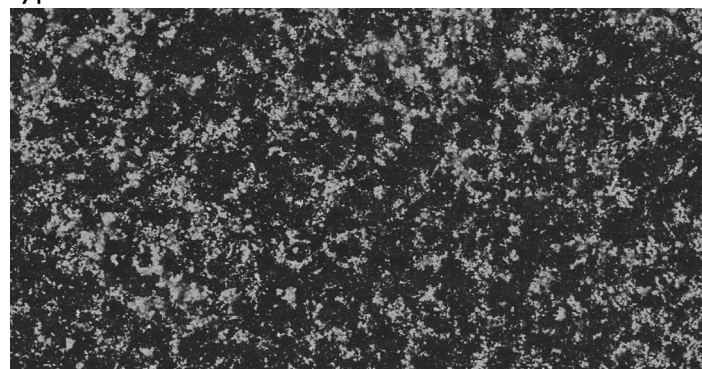
Cobalt ratio (wt%)

~13%

All property measurements are carried out, where possible, in accordance with relevant international standards. The data quoted is for comparative purposes only and should not be viewed as a product specification.

Element Six is constantly striving to improve its products and, therefore, reserves the right to alter product properties without prior notice.

Typical microstructure



BEC 20kV SS50 X500 Magnification 50µm

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This product has been manufactured under the controls established by a Bureau Veritas Certification approved management system.

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