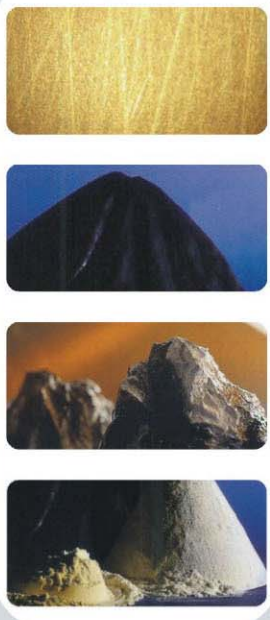




ISO Certified Carbide



Material ~body of tool~
 The Advanced Solid Tungsten Carbide

- stable microstructure
- high strength
- wide areas application

Material Technical Info of Carbide Material

Type of Carbide		MG	SMG	NMG
Chemical Data	Co (%)	10	12	9
	WCind. Doping (%)	90	88	91
Physical Data	Density ISO 3369 (g/cm ³)	14.5	14.1	14.3
	Hardness HV30 ISO 3878	1610	1680	2000
	Hardness HRA ISO 3778	91.9	92.3	94.1
	Transverse Rupture Strength (N/mm ²)	> 3600	> 3800	> 4000
	Transverse Rupture Strength (1000 psi)	> 522	> 551	> 565
Metallographic Data	Porosity ISO 4505 A	<= 02	<= 02	<= 02
	Porosity ISO 4505 B	00	00	00
	Porosity ISO 4505 C	00	00	00
Microstructure	Average Grain Size (μm)	0.6	0.5	0.2
ISO-Range	Classification ISO 513	K30-K40	K40-K50	K10-K30
Application	Work Material	Stainless steels Plastics Non ferrous metals Corrosion and heat resistant steels	Stainless steels Titanium alloys Non ferrous metals Corrosion and heat resistant steels	Fibreglass-reinforced plastic Carbon fibre-reinforced materials Hardened steel Titanium alloys Graphite-composite materials
	Characters	Extra fine grain hard metal for solid carbide rotary tools applications in the ISO K30-K40/C2-C3. Suit for most cuttings.	Superior grain for solid carbide rotary tools applications in very wide range ISO K40-K50 / C1-C2. The high hardness combine with high transverse rupture strength. Great for low and high speed milling and roughing work when milling and boring.	High hardness and extreme bending strength, suit for the drilling of electronic boards and other fibreglass-reinforced plastics and milling of difficult materials.