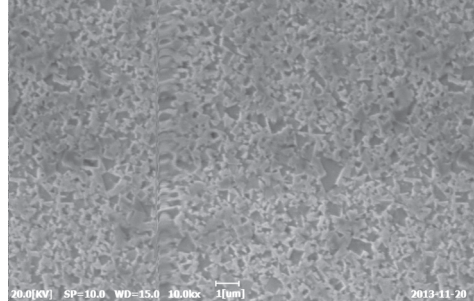
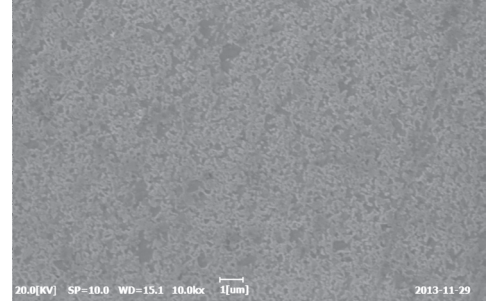


Tungsten carbide Rod Grade & Products List



WF 12



WU 08

Carbide Grades

Grade		WN09	WU08	WF08	WF12	
ISO-Range		K05-K10	K05-K10	K10-K20	K20-K30	
Diameter	mm	3.0~25.0	3.0~25.0	3.0~32.0	3.0~32.0	
Length	mm	320	320	320	320	
Chemical Data	Co	wt%	9	8	8	12
	WC+Dopant	wt%	91	92	92	88
Physical Data	Density	g/cm ²	14.30	14.30	14.40	14.10
	Hv10	Kg/mm ²	2120	2080	2000	1730
	HRA	ISO3738	94.5	94.2	93.5	92.0
	TRS	N/mm ²	3,800 ≥	3,200 ≥	3,200 ≥	3,500 ≥
Porosity	A <10μm	≤ 02	≤ 02	≤ 02	≤ 02	
	B >10μm	00	00	00	00	
	C (F.C)	00	00	00	00	
WC grain size	μm	0.2	0.3	0.5	0.5	
Application	Products/ Material Areas	Drill, Endmill	Drill, Endmill, Reamer	Drill, Endmill, Reamer	Drill, Endmill, Tap	
	Material Areas	High speed cutting, CFRP or Kevlar, composite materials, high wear resistant materials	Hardened steels, graphite, aluminium alloys. Composite materials, CFRP	Hard Materials, hardened and tempered steels, high speed cutting and dry cutting	Titanium alloys, stainless steels, grey cast iron, composite Materials nickel alloys	

• TRS Test specimen : 4 X 8 X 25mm or Ø4 X 30mm, Span. 20mm