



Advanced Material & Metal Compounds

□ Spherical Cast Tungsten Carbide

A kind of regularly spherical cast tungsten carbide with the microstructure is of homogeneous, dense and dendritic particle. It is widely used for exploiting drill bits, PCB drills, melting and penetrating, spray coating and built-up welding on worn surface.



No.	Item	Standard Specification				
		Size (mesh / mm)			Chemical	
1	Spherical CWC					
2	Grade	SYZ20-40	20-40	0.84-0.42	W	95-96%
		SYZ40-60	40-60	0.42-0.25	Total C	3.8-4.1%
		SYZ60-80	60-80	0.25-0.18	Free C	0.08%
		SYZ60-100	60-100	0.25-0.15	Ti/Cr	0.1% ea.
		SYZ100-200	100-200	0.15-0.075	V/O	0.05% ea.
		SYZ200-325	200-325	0.075-0.045	Si	0.02%
		SYZ100-325	100-325	0.15-0.045	Fe	0.50%
	SYZ325	-325	0.045	MO+Co+Ni	0.20%	
3	Density	15.8-16.7g/cm ³				
4	Micro-hardness	HV2700-3300				
5	Packing	In sealed plastic bag, iron drum outside, 50/100kgs net.				

□ Single Crystal Tungsten Carbide

Single Crystal Tungsten Carbide or Macro-crystalline Tungsten Carbide, fully carbonized and dense alloyed powder with coarser grain, is a new kind of cemented carbide material as substantial material for mining and geological prospect, it is of more uniform structure and higher thermal stability.



No.	Item	Standard Specification						
		Size		Density	Chemical % Max each			
1	Single crystal WC	Mesh	mm	g/cm3	Ni %	Co %	W Balance	
2	Grade	TC50100	40-60	0.25-0.425	6.6-7.4	-	-	Total C 6.1-6.2 Free C 0.06 Ti 0.15 Si 0.02 Fe 0.25 Nb/Ta 0.03
		TC51030	60-80	0.25-0.18	6.6-7.2	2.5-3.5	-	
		TC51040	80-200	0.18-0.075	6.4-7.0	3.5-4.5	-	
		TC51050	200-400	0.075-0.038	6.0-6.6	4.5-5.5	-	
		TC52030	-325	<0.045	5.8-6.4	-	2.5-3.5	
		TC52040	Micro-hardness (Load 100g)		15.4-15.6	-	3.5-4.5	
	TC52050				-	4.5-5.5		
3	Packing	In iron drum with sealed plastic bag inside, 50/100kgs net each						

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