

Tungsten Carbide Property DATASHEET

CARBIDE PROPERTIES

Series	Grade	HIP	CIP	Grain	Co (%)	Density g/cm ³	Hardness		T.R.S	Applications
							HRA	HV	N/mm ²	
Wear-resistant	C-M10	•	•	Superfine	6	14.8	94	1900	3800	Often used for powder metallurgy dies, and blade, chip. Sealed ring and gasket ring.
	C-M20	•	•	medium	6.5	14.88	91	1550	3100	
	C-M30	•	•	medium	8	14.62	89,5	1400	3200	High hardness, wear-resistant, used widely in common drawing dies.
	C-M33	•	•	fine	8	14.6	92	1700	3800	Used widely in drawing dies which is for high rigidity mat.
Wear & impact-resistant series	C-C10	•		medium	10	14.3	89	1200	3430	Toughness and hardness are good, widely used in punches, bushes, cavity inserts, core inserts. You also can choose this material for forming dies, curling circle dies, roll shape dies, bid stress drawing dies.
	C-C30		•	medium	15	14.2	87	1070	3500	
	C-C15	•		fine	13	14.06	91	1550	3600	
	C-C35	•		fine	15	13.85	89.5	1320	3700	Used commonly for sheet punching, guiding frame. LED frame. IC dies, rotor-stator.
	C-C38	•		Medium/fine	12	14.2	89	1400	3300	Used for punching steel sheet, E&I sheet.
	C-C78	•		fine	12	14.1	90	1450	3950	Can be used specially when wire cut, EDM.
	C-C40	•	•	tongh	20	13.6	84	850	2850	Used in common cold punching dies, cold heading dies, cold extruding dies.
	C-C50	•	•	tongh	22	13.4	83	780	2950	Used when stress is big, such as screw, screw nut forging dies.
Supering grade	C-QX05	•		superfine	7	14.6	94	1950	3520	Superhigh hardness, only used for small impacts and knife.
	C-QX10	•		superfine	8	14.6	92.8	1730	3800	
	C-QX20	•		superfine	10	14.45	91.8	1550	4200	
	C-QX30	•		superfine	12	14.15	92.3	1640	4000	
Hear resistant	C-R20		•	medium	patent	13	83	780	2550	Used in hot forging dies.
	C-R50		•	medium	patent	13.2	84	850	2550	Medium and small sections extruded, hot forging dies.
Non magnetic	C-W10	•	•	medium	Ni	14.3	89.5	1320	1500	Used in non magnetic wear resistant parts whose's stress is small.
	C-W10X	•	•	fine	Ni	14.3	92	1760	2700	
	C-W30	•	•	medium	Ni	14	87	1160	3000	Used in common magnetic forming dies.
	C-W35	•	•	fine	Ni	13.8	86.5	1070	2900	
	C-W40	•	•	medium	Ni	13.5	85.5	930	3000	