

Cemented Carbide Grades and Physical Properties

Carbide Grade	WC Grain Size	Binder	Binder Content %w/w	Density g/cm ³	Hardness HV30	Hardness HRa	Transverse Rupture Strength* N/mm ²	Pressure Resistance* N/mm ²	Fracture Toughness** N/mm ² . m ^{1/2}	Special Properties
RX8UF-NG	ultrafine	Cobalt	8	14.52	1880	93.6	3800	6300	8.5	
RX12UF-NG			12	14.06	1680	92.6	4200	6000	9.5	
RX3-NG	submicron	Cobalt	3.3	15.15	2000	94.2	3000	6500	7.8	
RX6-NG			6	14.83	1820	93.3	3300	6400	8.5	
RX7-NG			7.5	14.65	1740	92.9	3500	6300	9.0	
RX10-NG			10	14.43	1600	92.1	3700	6000	9.8	
RX15-NG			15	13.95	1370	90.4	4000	5500	12.5	
RF13	fine	Cobalt	6.5	14.83	1690	92.7	2600	5700	9.2	
RF24			12	14.28	1380	90.5	3000	4800	11.2	
RF40			20	13.52	1080	87.2	3500	4000	18	
RF54			27	12.94	890	84.7	3600	3600	>20	
RM13	medium	Cobalt	6.5	14.83	1580	92.0	2700	5500	9.5	
RM16			8.5	14.64	1500	91.4	2800	5300	10.4	
RM22			11	14.41	1390	90.5	2900	5000	11.8	
RM30			15	14.01	1230	88.9	3200	4500	14.5	
RCR17	medium	Cobalt	8.5	14.5	1600	92.1	2900	5400	10.0	EDM grades with corrosion inhibitor
RCR24			12	14.15	1400	90.6	3200	5000	13.0	
RCR30			15	13.85	1200	88.5	3400	4500	17.5	
RB14	coarse	Cobalt	7	14.81	1450	91.0	2800	4800	10.0	Coarse grain material of high toughness
RB10			10	14.48	1300	89.7	3000	4400	12.5	
RB15-H			15	14.03	1080	87.2	3100	3800	18.5	
RB20-H			22	13.44	870	84.5	3200	3300	>20	
RCS12	submicron	Nickel	6	14.8	1700	92.7	2600	5400	8.1	corrosion-resistant (non-magnetisable)
RCS17			8.5	14.5	1650	92.4	2800	5200	8.5	
RCS24			12	14.09	1370	90.4	3000	4800	10.2	
RCN	fine	Nickel	8	14.53	1600	92.1	2600	5100	8.3	corrosion-resistant (non-magnetisable)
RCFN22		Nickel-Chromium	11	14.33	1600	92.1	1800	4500	8.0	corrosion-resistant non-magnetisable
RCM30	medium	Nickel	15	14.00	1100	87.3	2900	4000	13.0	corrosion-resistant
RXE20	submicron	Iron/Nickel/Cobalt	10	14.10	1600	92.1	3200	5500	10.8	alternative binder (high toughness)
RXE40			20	13.05	1250	89.1	3600	4000	18.5x	

* Approximate value | ** The measured values K1c depend on the geometry and the preparation of the sample and may differ from the values obtained by different methods. Technical modifications are reserved.

