

Cemented Carbide Grades and Physical Properties

Hartmetall Estech AG, CH-6285 Hitzkirch
 Tel +41 (0)41 919 91 00
 info.hartmetall@estech.ch
 www.hartmetall-estech.ch



Carbide Grade	Grain Size WC	Binder	Binder Content % w/w	Density g/cm ³	Hardness		Transverse Rupture Strength** N/mm ²	Pressure Resistance** N/mm ²	Fracture Toughness*** N/mm ² . m ^{1/2}	Special Properties/ Applications
					HV30	HRa				
RX8-UF	ultrafine	Cobalt	8.0	14.5	1860	93.2	4100	6300	8.5	ideal for high performance milling
RX12-UF			12.0	14.0	1680	92.2	4400	6000	9.5	
RX3*	submicron	Cobalt	3.3	15.2	2000	94.0	3400	6500	7.8	for extreme wear applications
RX6			6.0	14.8	1820	93.1	3800	6400	8.5	our allrounder for metal cutting
RX7			7.5	14.7	1740	92.7	4100	6300	9.0	
RX10			10.0	14.4	1600	91.9	4300	6000	9.8	
RX15			15.0	13.9	1390	90.3	4500	5500	12.5	gearing, paper knives
RF13	fine	Cobalt	6.5	14.8	1690	92.5	3600	5700	9.2	slitting saws, gun drills
RF24			12.0	14.3	1390	90.3	4200	5200	11.2	wear protection
RM13	medium	Cobalt	6.5	14.8	1590	91.9	3600	5500	9.5	for wear applications with higher toughness requirements
RM17			8.5	14.6	1500	91.2	3800	5300	10.4	
RM22			11.0	14.4	1390	90.3	400	5000	11.8	
RM30			15.0	14.0	1230	88.7	4200	4500	14.5	
RCR17	medium	Cobalt	8.5	14.5	1550	91.6	3700	5400	10.0	EDM grades with corrosion inhibitor, optimal stress crack reduction
RCR24			12.0	14.2	1380	90.3	3900	5000	13.0	
RCR30			15.0	13.9	1260	89.1	4100	4500	17.5	
RB20	coarse	Cobalt	10.0	14.5	1300	89.5	3800	4600	12.5	high toughness; for mining and road construction, hot forming
RB30			15.0	14.0	1080	87.2	4000	4000	18.5	
RB44*			22.0	13.4	890	84.7	3800	3500	>20	
RCS12	submicron	Nickel	6.0	14.8	1770	92.9	3400	6000	8.1	corrosion resistant (non-magnetisable on request), FDA
RCS17			8.5	14.5	1650	92.2	4000	5800	8.5	
RCF16	fine	Nickel	8.0	14.5	1600	91.9	3900	5500	8.3	
RCF24			12.0	14.2	1350	90.0	4200	5000	11.0	
RCFN22*			11.0	14.2	1600	91.9	2100	4500	8.0	
RCM30*	medium		15.0	14.0	1100	87.3	3800	4000	13.0	corrosion resistant, FDA

* on request

** 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.

Doc. 0-3-3.01-D/Juli 2021