

Material Group		Gr. N°	Material Examples	Hardness	Vc [m/min]	
					min	max
P	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	70	120
				190 HB	65	110
				250 HB	60	100
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	65	110
				230 HB	60	90
				280 HB	55	85
				350 HB	55	80
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	60	90
				280 HB	55	80
				320 HB	55	75
				350 HB	50	70
	M	Austenitic	4	304, 316, X5CrNi18-9	180 HB	60
240 HB					50	70
Duplex		5	X2CrNiN23-4, S31500	290 HB	-	-
				310 HB	-	-
Ferritic & Martensitic		6	410, X6Cr17, 17-4PH, 430	200 HB	40	60
				42 HRc	30	45
K	Grey	7	GG20, GG40, EN-GJL-250, N030B	150 HB	70	120
				200 HB	65	110
				250 HB	55	100
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	65	110
				200 HB	60	100
				250 HB	55	90
S	Fe, Ni & Co based	9	Incoloy 800	240 HB	-	-
			Inconel 700	250 HB	-	-
			Stellite 21	350 HB	-	-
	Ti based	10	T40	-	-	-
			TiAl6V4	-	-	-
H	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRc	35	60
				50 HRc	30	50
				55 HRc	-	-
	Chilled Cast Iron	Ni-Hard 2	400 HB	-	-	
	White Cast Iron	G-X300CrMo15	55 HRc	-	-	
NF	Aluminium	12	AlSi12	130 HB	120	180

Material Group	Gr. N°	Material Examples	Hardness	Profiling		Slotting		fz [mm/tooth]				
				ap	ae	ap	Ø6.0	Ø8.0	Ø10.0	Ø12.0	Ø16.0	
P	Non-Alloyed	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	1.5xØ	0.5xØ	1.0xØ	0.032	0.044	0.052	0.062	0.084	
			190 HB									
			250 HB									
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	1.5xØ	0.5xØ	1.0xØ	0.031	0.042	0.050	0.059	0.074
				230 HB								
				280 HB			0.7xØ	0.026	0.034	0.042	0.050	0.059
				350 HB								
	High Alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	1.5xØ	0.5xØ	1.0xØ	0.027	0.037	0.044	0.051	0.059
				280 HB								
320 HB				0.6xØ			0.020	0.028	0.033	0.039	0.042	
350 HB												
M	Austenitic	4	304, 316, X5CrNi18-9	1.5xØ	0.5xØ	1.0xØ	0.022	0.030	0.036	0.042	0.054	
												240 HB
M	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	1.5xØ	0.5xØ	1.0xØ	0.017	0.023	0.028	0.032	0.040	
												200 HB 42 HRc
K	Grey	7	GG20, GG40, EN-GJL-250, No30B	1.5xØ	0.5xØ	1.0xØ	0.037	0.051	0.061	0.071	0.079	
												150 HB
												200 HB
	Malleable & Nodular	8	GGG40, GGG70, 50005	1.5xØ	0.5xØ	1.0xØ	0.032	0.044	0.052	0.062	0.075	
												150 HB 200 HB 250 HB
H	Steel	11	X100CrMo13, 440C, G-X260NiCr42	1.5xØ	0.3xØ	0.2xØ	0.014	0.019	0.022	0.026	0.029	
NF	Al (>8%Si)	12	AlSi12	1.5xØ	0.5xØ	0.1xØ	0.034	0.046	0.055	0.065	0.084	