

SNMG 120408 NN LT 10

FT000322

	Material Group	 SAPPHIRE CUTTING TOOLS Group	Material Example	Hardness	D.O.C		Feed		Amax	Vc		Advised D.O.C	Advised Feed	Advised Vc
					min[mm]	max[mm]	min[mm/t]	max[mm/t]	[mm^2]	min[m/min]	max [m/min]	[mm]	[mm/t]	[m/min]
Steel	Non Alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	5	0.3	0.7	2.54	180	330	3	0.54	240
				190 HB	0.5	5	0.3	0.7	2.54	180	280	3	0.5	220
				250 HB	0.5	5	0.3	0.63	2.12	180	250	3	0.47	200
	Low Alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	230 HB	0.5	4	0.3	0.63	1.69	120	250	3	0.45	180
				280 HB	0.5	4	0.25	0.56	1.69	120	210	3	0.43	150
				180 HB	0.5	5	0.3	0.63	1.69	120	280	3	0.45	200
				350 HB	0.5	3.5	0.25	0.56	1.41	120	180	2.7	0.43	130
	High Alloyed	3	X40CrMOV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	4	0.25	0.56	1.69	70	190	2.5	0.43	140
				280 HB	0.5	4	0.25	0.56	1.69	70	150	2.5	0.43	120
				320 HB	0.5	3	0.25	0.49	1.13	70	130	2.2	0.4	100
				350 HB	0.5	3	0.25	0.49	1.13	70	110	2.2	0.4	90
Stainless Steel	Austentic	4	304, 316, X5CrNi18-9	180 HB	0.5	5	0.28	0.56	1.69	170	270	3	0.36	190
				240 HB	0.5	5	0.28	0.56	1.41	160	220	3	0.31	170
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	4	0.25	0.49	1.13	80	150	2.5	0.34	100
				310 HB	0.5	4	0.25	0.49	1.13	70	140	2.5	0.34	90
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	5	0.25	0.56	0.99	170	250	2.5	0.28	190
				42 HRc	0.5	4	0.25	0.56	0.99	120	190	2.2	0.28	130
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, N030B	150 HB	0.5	5	0.21	0.84	2.82	170	250	3	0.5	200
				200 HB	0.5	5	0.21	0.84	2.54	160	230	3	0.5	180
				250 HB	0.5	5	0.21	0.77	2.54	150	210	3	0.5	160
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	5	0.21	0.7	2.12	120	250	3	0.43	180
				200 HB	0.5	5	0.21	0.7	1.83	120	230	3	0.43	160
				250 HB	0.5	5	0.21	0.7	1.69	120	190	3	0.43	140
NiTi Alloy	Fe, Ni & Co Based	9	Incoloy 800	240 HB	0.5	3	0.28	0.49	0.99	30	50	2	0.4	30
			Inconel 700	250 HB	0.5	3	0.28	0.49	0.99	30	50	2	0.4	30
			Stellite 21	350 HB	0.5	3	0.28	0.49	0.99	30	40	2	0.4	30
	Ti Based	10	T40	-	0.5	3	0.28	0.49	0.99	40	60	2	0.43	45
			TiAl6V4	-	0.5	3.5	0.28	0.56	1.13	50	70	2	0.47	55
Hardened Materials	Steel Chilled Cast Iron White Cast Iron	11	G-X300CrMo15	55 HRc	0.5	1.5	0.16	0.28	0.42	30	50	1	0.21	40
			Ni-Hard 2	400 HB	0.5	2	0.16	0.35	0.56	40	60	1.5	0.26	50
			X100CrMo13, 440C, G-X260NiCr42	45 HRc	0.5	2.5	0.16	0.42	0.85	50	100	2	0.36	80
				50 HRc	0.5	2	0.16	0.35	0.56	40	90	1.5	0.28	70
				55 HRc	0.5	1.5	0.16	0.28	0.42	40	80	1	0.26	60
Aluminium	Al (>8%Si)	12	AlSi12	130 HB	0.5	6	0.28	0.84	2.54	200	400	3	0.57	280