

TCMT 110204 NN LT 10 & LT 1000

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm²]	V _c [m/min]		Optimal cutting conditions		
					min	max	min	max		min	max	D.O.C.	Feed	V _c
Steel	Non-alloyed	1	1 C35, Ck45, 1020,	125 HB	0.2	2.1	0.08	0.20	0.37	180	330	1.0	0.18	300
			2 1045, 1060, 28Mn6	190 HB		1.8		0.19	0.32		280			260
			3	250 HB		1.8		0.17	0.30		250			240
	Low alloyed	2	6 42CrMo4, St50,	180 HB	0.2	1.8	0.08	0.17	0.31	120	280	1.0	0.15	260
			4,6 Ck60, 4140, 4340,	230 HB		1.8		0.17	0.30		250			240
			5,7 100Cr6	280 HB		1.4		0.15	0.25		210			200
			8	350 HB		1.4		0.15	0.22		180			180
	High alloyed	3	10 X40CrMoV5,	220 HB	0.2	1.8	0.07	0.15	0.25	70	190	1.0	0.12	180
			10 H13, M42, D3,	280 HB		1.8		0.14	0.25		150			140
			11 S6-5-2, 12Ni19	320 HB		1.4		0.12	0.20		130			120
			11	350 HB		1.4		0.12	0.16		110			110
Stainless Steel	Austenitic	4	14 304, 316,	180 HB	0.2	1.8	0.08	0.15	0.20	170	270	1.0	0.12	260
			14 X5CrNi18-9	240 HB		1.8		0.15	0.16	160	220			210
	Duplex	5	14 X2CrNiN23-4,	290 HB	0.2	1.4	0.07	0.12	0.12	80	150	1.0	0.12	140
			14 S31500	310 HB		1.4		0.12	0.12	70	140			140
	Ferritic & Martensitic	6	12 410, X6Cr17,	200 HB	0.2	1.8	0.08	0.15	0.20	170	250	1.0	0.15	240
			13 17-4 PH, 430	42 HRc		1.4		0.14	0.16	120	190			180
Cast Iron	Grey	7	15 GG20, GG40,	150 HB	0.2	2.1	0.06	0.17	0.40	170	250	1.0	0.18	240
			16 EN-GJL-250, No30B	200 HB		2.1		0.17	0.37	160	230			220
			16	250 HB		2.1		0.17	0.37	150	210			200
	Malleable & Nodular	8	17,19 GGG40, GGG70,	150 HB	0.2	1.8	0.06	0.15	0.30	120	250	1.0	0.15	240
			17,19 50005	200 HB		1.8		0.15	0.25		230			220
			18,20	250 HB		1.8		0.15	0.25		190			180
High Temp. Alloys	Fe, Ni & Co based	9	31,32 Incoloy 800	240 HB	0.2	1.4	0.08	0.13	0.16	25	50	1.0	0.12	40
			33 Inconel 700	250 HB		1.4		0.13	0.16	25	50			40
			34 Stellite 21	350 HB		1.4		0.13	0.16	23	45			35
	Ti based	10	36 TiAl6V4	-	0.2	1.4	0.08	0.14	0.20	45	65	1.0	0.14	60
			37 T40	-		1.4		0.12	0.16	35	60			50
Hardened Mat.	Steel	11	38 X100CrMo13,	45 HRc	0.2	1.3	0.04	0.10	0.12	50	100	0.8	0.11	90
			38 440C,	50 HRc		1.1		0.09	0.11	40	90	0.6	0.09	80
			38 G-X260NiCr42	55 HRc		1.0		0.08	0.08	40	80	0.5	0.07	70
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.2	1.1	0.04	0.10	0.11	40	60	0.6	0.11	50
	White Cast Iron	41	G-X300CrMo15	55 HRc	0.2	1.0	0.04	0.08	0.08	30	50	0.5	0.07	40
NF	Al (>8%Si)	12	25 AlSi12	130 HB	0.2	2.8	0.08	0.26	0.43	200	400	1.0	0.20	350