

WNMG 080408 NN LT 10 & LT 1000

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/rev]		Amax [mm ²]	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	0.5	3.5	0.21	0.50	1.80	180	280	2.4	0.35	240	
			2	1045, 1060,	190 HB										220	
			3	28Mn6	250 HB										200	
	Low alloyed	2	6, 4,6, 5,7, 8	6	42CrMo4, St50,	180 HB	0.5	3.5	0.21	0.45	1.20	120	280	2.4	0.32	200
				4,6	Ck60, 4140, 4340,	230 HB										180
				5,7	100Cr6	280 HB										150
				8		350 HB										130
	High alloyed	3	10, 10, 11, 11	10	X40CrMoV5,	220 HB	0.5	2.8	0.18	0.40	1.20	70	190	2.0	0.30	140
				10	H13, M42, D3,	280 HB										120
				11	S6-5-2, 12Ni19	320 HB										100
				11		350 HB										90
Stainless Steel	Austenitic	4	14	304, 316,	180 HB	0.5	3.5	0.20	0.40	1.20	170	270	2.4	0.25	190	
			14	X5CrNi18-9	240 HB										170	
	Duplex	5	14, 14	X2CrNiN23-4,	290 HB	0.5	2.8	0.18	0.35	0.80	80	150	2.0	0.28	100	
				S31500	310 HB										90	
	Ferritic & Martensitic	6	12, 13	410, X6Cr17,	200 HB	0.5	3.5	0.22	0.40	1.00	170	250	2.4	0.32	190	
				17-4 PH, 430	42 HRC										120	190
Cast Iron	Grey	7	15	GG20, GG40,	150 HB	0.5	3.5	0.15	0.60	2.00	170	250	2.4	0.35	200	
			15	EN-GJL-250,	200 HB										160	
			16	No30B	250 HB										150	210
	Malleable & Nodular	8	17,19, 17,19, 18,20	GGG40, GGG70,	150 HB	0.5	3.5	0.15	0.50	1.50	120	230	2.4	0.30	180	
				50005	200 HB										160	
			250 HB	190	140											
High Temp. Alloys	Fe, Ni & Co based	9	31,32	Incoloy 800	240 HB	0.5	2.1	0.20	0.35	0.70	25	45	1.6	0.28	32	
			33	Inconel 700	250 HB										30	
			34	Stellite 21	350 HB										28	
	Ti based	10	36, 37	TiAl6V4	-	0.5	2.8	0.20	0.40	0.80	45	65	1.6	0.33	55	
				T40	-										35	55
Hardened Mat.	Steel	11	38	X100CrMo13,	45 HRC	0.5	1.8	0.11	0.30	0.60	50	100	1.6	0.25	80	
			38	440C,	50 HRC										70	
			38	G-X260NiCr42	55 HRC										60	
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.5	1.5	0.11	0.25	0.40	40	60	1.2	0.18	50		
White Cast Iron	41	G-X300CrMo15	55 HRC	0.5	1.5	0.11	0.20	0.30	30	50	0.8	0.15	40			
NF	Al (>8%Si)	12	25	AISI12	130 HB	0.5	4.2	0.20	0.60	1.80	200	400	2.4	0.40	280	