

## OFMT 070405 TN LT 30

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [mm]		Feed [mm/tooth]		V <sub>c</sub> [m/min]		Optimal cutting conditions					
					min	max	min	max	min	max	D.O.C.	Feed	V <sub>c</sub>			
Steel	Non-alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.5	4.5	0.22	0.51	190	330	3.0	0.37	250			
		2		190 HB									300	220		
		3		250 HB									250	200		
	Low alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.5	4.5	0.18	0.40	150	240	3.0	0.32	200	250		
				230 HB										210	180	
				280 HB										190	150	
				350 HB										170	140	
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.5	3.2	0.14	0.35	90	150	2.2	0.29	130	250		
				280 HB										130	120	
				320 HB										110	100	
				350 HB										90	80	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.5	4.5	0.18	0.35	190	250	3.0	0.29	220			
				240 HB									210	190		
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.5	3.2	0.14	0.29	70	130	2.2	0.26	100			
				310 HB									120	90		
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.5	4.5	0.18	0.35	150	210	3.0	0.29	190	250		
				42 HRC										150	130	
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.5	4.5	0.22	0.51	150	240	3.0	0.37	200			
				200 HB									220	180		
				250 HB									190	160		
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.5	4.5	0.18	0.45	100	180	3.0	0.32	150	200		
				200 HB										180	150	
				250 HB										150	130	
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800	240 HB	0.5	3.2	0.14	0.29	25	45	2.2	0.26	32			
				250 HB									45	30		
				350 HB									45	30		
	Ti based	10	TiAl6V4	-	0.5	3.2	0.14	0.32	40	65	2.2	0.29	55			
T40	-	0.29	30	55									0.26	40		
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.4	1.6	0.12	0.29	40	80	1.5	0.22	60			
				50 HRC									70	1.1	0.21	55
				55 HRC									60	0.7	0.19	50
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.4	1.3	0.12	0.29	40	80	1.1	0.22	50			
	White Cast Iron	41	G-X300CrMo15	55 HRC	0.4	0.5	0.12	0.22	30	60	0.7	0.19	40			
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.5	4.5	0.22	0.51	200	400	3.0	0.40	280		