

APKT 160424 ER LT 30

Material Group	Gr. N°	VDI Group	Material Examples*	Hardness	D.O.C. [inch]		Feed [inch/tooth]		V _c [sfm]		Optimal cutting conditions							
					min	max	min	max	min	max	D.O.C.	Feed	V _c					
Steel	Non-alloyed	1	C35, Ck45, 1020, 1045, 1060, 28Mn6	125 HB	0.020	0.590	0.007	0.013	620	1080	0.197	0.009	820					
		2		190 HB									720					
		3		250 HB									650					
	Low alloyed	2	42CrMo4, St50, Ck60, 4140, 4340, 100Cr6	180 HB	0.020	0.590	0.006	0.010	490	780	0.197	0.008	650					
		4,6		230 HB									590					
		5,7		280 HB									0.590	0.009	420	620	490	
		8		350 HB									0.590	0.009	420	550	450	
	High alloyed	3	X40CrMoV5, H13, M42, D3, S6-5-2, 12Ni19	220 HB	0.020	0.422	0.005	0.009	290	490	0.148	0.007	420					
		10		280 HB									0.422	0.009	290	420	390	
		11		320 HB									0.422	0.007	190	360	320	
		11		350 HB									0.422	0.007	190	290	260	
Stainless Steel	Austenitic	4	304, 316, X5CrNi18-9	180 HB	0.020	0.590	0.006	0.010	620	820	0.197	0.008	720					
		14		240 HB									0.590	0.005	0.009	520	680	620
	Duplex	5	X2CrNiN23-4, S31500	290 HB	0.020	0.422	0.005	0.007	220	420	0.148	0.006	320					
		14		310 HB									0.422	0.007	390	290		
	Ferritic & Martensitic	6	410, X6Cr17, 17-4 PH, 430	200 HB	0.020	0.590	0.006	0.010	490	680	0.197	0.008	620					
		13		42 HRC									0.422	0.008	290	490	420	
Cast Iron	Grey	7	GG20, GG40, EN-GJL-250, No30B	150 HB	0.020	0.590	0.007	0.013	490	780	0.197	0.009	650					
		15		200 HB									0.590	0.013	720	590		
		16		250 HB									0.590	0.013	620	520		
	Malleable & Nodular	8	GGG40, GGG70, 50005	150 HB	0.020	0.590	0.006	0.011	320	650	0.197	0.008	590					
		17,19		200 HB									0.590	0.011	590	490		
		18,20		250 HB									0.590	0.011	490	420		
High Temp. Alloys	Fe, Ni & Co based	9	Incoloy 800 Inconel 700 Stellite 21	240 HB	0.020	0.422	0.005	0.007	80	140	0.148	0.006	100					
		33		250 HB									0.422	0.007	140	90		
		34		350 HB									0.422	0.007	140	90		
	Ti based	10	TiAl6V4 T40	-	0.020	0.422	0.005	0.008	130	210	0.148	0.007	180					
37	-	0.422		0.007									90	180	130			
Hardened Mat.	Steel	11	X100CrMo13, 440C, G-X260NiCr42	45 HRC	0.020	0.211	0.004	0.007	130	260	0.098	0.006	190					
		38		50 HRC									0.126	0.006	220	0.074	0.005	180
		38		55 HRC									0.063	0.006	190	0.049	0.005	160
	Chilled Cast Iron	40	Ni-Hard 2	400 HB	0.020	0.169	0.004	0.007	130	260	0.074	0.006	160					
	White Cast Iron	41	G-X300CrMo15	55 HRC	0.020	0.063	0.004	0.006	90	190	0.049	0.005	130					
NF	Al (>8%Si)	12	25	AlSi12	130 HB	0.020	0.590	0.007	0.013	650	1310	0.197	0.010	910				