








Machined Material	Tool Material	Coating	SFM	Roughing Tools	3/8"	1/2"	5/8"	3/4"	1"	1-1/4"	2"	
Aluminum					0.0035	0.005	0.0068	0.0083	0.01	0.012	0.015	
	HSS/ CO		1000	6209	10000	8000	6400	5333	4000	3200	2000	
	Powder metal	TiCN	2500	TC6A0R	25000	19000	15200	12700	9550	7640	4800	
	CARBIDE	TiCN	3000	TC4A0R	32000	24000	19200	16000	12000	NA	NA	
Mild Steel- 1018					0.002	0.0028	0.0036	0.0045	0.0055	0.006	0.0085	
	HSS/ CO		120	6205-7	1280	960	768	640	480	384	240	
	HSS/ CO	TiCN	250	TC6205-7	2640	1980	1590	1320	990	800	500	
	CARBIDE	TiCN	360	TC4SOR	3840	2880	2310	1920	1440	NA	NA	
Alloy Steel - 4140					0.0015	0.0021	0.0028	0.0034	0.004	0.0055	0.006	
	HSS/ CO		80	6205-7	850	640	512	425	320	255	160	
	HSS/ CO	TiCN	110	TC6205-7	1175	880	700	585	440	350	220	
	CARBIDE	TiCN	200	TC4SOR	2100	1570	1250	1050	820	NA	NA	
Stainless					0.0015	0.0021	0.0028	0.0034	0.004	0.005	0.006	
	CARBIDE	TiAlN	385	TR4MOR	4100	3080	2460	2050	1540	NA	NA	
	303	HSS/ CO	100	TC6205	1060	800	640	533	400	320	200	
	Powder Metal	TiCN	135	TC6K05	1440	1080	865	720	540	430	270	
Stainless PH					0.001	0.0016	0.0022	0.0028	0.0035	0.004	0.005	
	CARBIDE	TiAlN	220	Varimill-4fl	2240	1680	1340	1120	840	670	NA	
	15-5 Ph 17-4 Ph	HSS/ CO	70	TC6205	750	560	450	375	280	225	140	
	Powder Metal	TiCN	95	TC6K05	1015	760	610	510	380	300	190	
Titanium					0.002	0.002	0.003	0.0033	0.004	0.005	0.0065	
	CARBIDE	TiAlN	200	Varimill-4fl	2133	1600	1280	1066	800	640	NA	
	HSS/ CO		50	Wavecut	533	400	320	265	200	160	100	
	Powder Metal	TiAlN	68	TF6TOR	725	544	435	362	272	218	136	
Inconel					0.0008	0.0012	0.0016	0.002	0.0025	0.0032	0.004	
	CARBIDE	TiAlN	100	TR4MOR	1066	800	640	535	400	NA	NA	
	ASP	Uncoated	25	6K05	265	200	160	135	100	80	50	
	Powder Metal	TiCN	35	TC6K05	375	280	225	185	140	112	70	
RPM	Table feed = RPM X # fl X chip load/tooth			The above Speeds and Feeds are based on Full slotting cuts, 75% of the tool diameter in Depth, or, alternatively, Profile cuts with up to 2 x D in axial depth, and 30% of D in radial depth of cut. This data is based on stub and regular lengths of cut. Reduce feed rates for long tools by up to 50%								
Chip load / tooth												
ASP = Powder Metal material with 12% Cobalt												