

Material group	Hardness		SFM	Feed Rate - IPR									
	HRC	BHN		1/16 in. 1.590 mm	1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm	1 1/4 in. 31.750 mm	1 1/2 in. 38.100 mm
Common structural steels	-	≤ 150	475	0.0028	0.0050	0.0080	0.0120	0.0120	0.0160	0.0200	0.0250		
	≤ 32	≤ 301	395	0.0016	0.0039	0.0063	0.0098	0.0098	0.0124	0.0157	0.0197		
Free-cutting steels	≤ 25	≤ 255	560	0.0011	0.0063	0.0098	0.0150	0.0157	0.0197	0.0248	0.0315		
	≤ 32	≤ 301	475	0.0011	0.0063	0.0098	0.0150	0.0157	0.0197	0.0248	0.0315		
Unalloyed heat-treatable steels	≤ 20	≤ 220	425	0.0011	0.0063	0.0098	0.0150	0.0157	0.0197	0.0248	0.0315		
	≤ 25	≤ 255	410	0.0028	0.0049	0.0079	0.0124	0.0124	0.0157	0.0197	0.0248		
	≤ 32	≤ 301	395	0.0028	0.0049	0.0079	0.0124	0.0124	0.0157	0.0197	0.0248		
Alloyed heat-treatable steels	≤ 32	≤ 301	395	0.0028	0.0049	0.0079	0.0124	0.0124	0.0157	0.0197	0.0248		
	≤ 43	≤ 402	345	0.0028	0.0049	0.0079	0.0124	0.0124	0.0157	0.0197	0.0248		
Unalloyed case hardened steels	≤ 25	≤ 255	475	0.0011	0.0063	0.0098	0.0150	0.0157	0.0197	0.0248	0.0315		
Alloyed case hardened steels	≤ 32	≤ 301	395	0.0028	0.0049	0.0079	0.0124	0.0124	0.0157	0.0197	0.0248		
	≤ 43	≤ 402	280	0.0007	0.0031	0.0049	0.0075	0.0079	0.0098	0.0124	0.0157		
Nitriding steels	≤ 32	≤ 301	360	0.0028	0.0049	0.0079	0.0124	0.0124	0.0157	0.0197	0.0248		
	≤ 43	≤ 402	345	0.0007	0.0031	0.0049	0.0075	0.0079	0.0098	0.0124	0.0157		
Tool steels	≤ 25	≤ 255	260	0.0016	0.0039	0.0063	0.0098	0.0098	0.0124	0.0157	0.0197		
	≤ 43	≤ 402	215	0.0007	0.0031	0.0049	0.0075	0.0079	0.0098	0.0124	0.0157		
High speed steels	≤ 43	≤ 402	195	0.0007	0.0025	0.0039	0.0059	0.0063	0.0079	0.0098	0.0124		
Spring steels	≤ 38	≤ 354	195	0.0008	0.0020	0.0031	0.0049	0.0049	0.0063	0.0079	0.0098		
Hardened steels	≤ 48	≤ 460	180	0.0008	0.0020	0.0031	0.0049		0.0063	0.0079	0.0098		
	≤ 66	-	115	0.0004	0.0016	0.0025	0.0039		0.0049	0.0063	0.0079		
Stainless steels, sulphured austenitic martensitic	≤ 28	≤ 273											
	≤ 36	≤ 337											
	≤ 46	≤ 435											
Cast iron	≤ 23	≤ 242											
	≤ 38	≤ 354											
Spheroidal graphite iron and malleable cast iron	≤ 23	≤ 242											
	≤ 38	≤ 354											
Chilled cast iron	≤ 38	≤ 354											
New cast materials GGV	≤ 20	≤ 220											
	≤ 32	≤ 301											
New cast materials ADI	≤ 32	≤ 301											
	≤ 43	≤ 402											
Special alloys	≤ 54	≤ 549	115	0.0007	0.0025	0.0039	0.0059		0.0079	0.0098	0.0124		
Ti and Ti-alloys	≤ 25	≤ 255	150	0.0007	0.0025	0.0039	0.0059		0.0049	0.0098	0.0124		
	≤ 43	≤ 402	130	0.0008	0.0020	0.0031	0.0049		0.0063	0.0079	0.0098		
Aluminium and Al-alloys	-	≤ 120											
Al wrought alloys	-	≤ 200											
Al cast alloys ≤ 10 % Si ≤ 24 % Si	-	≤ 180											
	-	≤ 180											
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150											
Brass, short-chipping long-chipping	-	≤ 180											
	-	≤ 180											
Bronze, short-chipping	-	≤ 180											
	≤ 25	≤ 255											
Bronze, long-chipping	≤ 25	≤ 255											
	≤ 32	≤ 301											
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK													

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