

Material group	Hardness		SFM	Feed Rate - IPR						
	HRC	BHN		0.0197 in. 0.5 mm	0.0315 in. 0.8 mm	0.0394 in. 1.0 mm	0.0591 in. 1.5 mm	0.0787 in. 2.0 mm	0.0984 in. 2.5 mm	0.1181 in. 3.0 mm
Common structural steels	-	≤ 150	330	0.0020	0.0031	0.0039	0.0059	0.0079	0.0098	0.0118
	≤ 32	≤ 301	330	0.0020	0.0031	0.0039	0.0059	0.0079	0.0098	0.0118
Free-cutting steels	≤ 25	≤ 255	330	0.0020	0.0031	0.0039	0.0059	0.0079	0.0098	0.0118
	≤ 32	≤ 301	295	0.0018	0.0028	0.0035	0.0051	0.0071	0.0087	0.0106
Unalloyed heat-treatable steels	≤ 20	≤ 220	295	0.0020	0.0031	0.0039	0.0059	0.0079	0.0098	0.0118
	≤ 25	≤ 255	295	0.0020	0.0031	0.0039	0.0059	0.0079	0.0098	0.0118
Alloyed heat-treatable steels	≤ 32	≤ 301	295	0.0018	0.0028	0.0035	0.0051	0.0071	0.0087	0.0106
	≤ 43	≤ 402	230	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094
Unalloyed case hardened steels	≤ 25	≤ 255	330	0.0018	0.0028	0.0035	0.0051	0.0071	0.0087	0.0106
Alloyed case hardened steels	≤ 32	≤ 301	280	0.0018	0.0028	0.0035	0.0051	0.0071	0.0087	0.0106
	≤ 43	≤ 402	230	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094
Nitriding steels	≤ 32	≤ 301	230	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094
	≤ 43	≤ 402	195	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094
Tool steels	≤ 25	≤ 255	165	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094
	≤ 43	≤ 402	195	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094
High speed steels	≤ 43	≤ 402	195	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035
Spring steels	≤ 38	≤ 354	195	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035
Hardened steels	≤ 48	≤ 460								
	≤ 66	-								
Stainless steels, sulphured austenitic	≤ 28	≤ 273	100	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035
	≤ 36	≤ 337	50	0.0002	0.0003	0.0005	0.0008	0.0013	0.0018	0.0024
martensitic	≤ 46	≤ 435	100	0.0005	0.0006	0.0009	0.0014	0.0020	0.0028	0.0035
	≤ 23	≤ 242	425	0.0024	0.0035	0.0047	0.0071	0.0094	0.0118	0.0142
Cast iron	≤ 38	≤ 354	425	0.0024	0.0035	0.0047	0.0071	0.0094	0.0118	0.0142
	≤ 38	≤ 354	395	0.0024	0.0035	0.0043	0.0067	0.0091	0.0110	0.0134
Spheroidal graphite iron and malleable cast iron	≤ 23	≤ 242	425	0.0024	0.0035	0.0047	0.0071	0.0094	0.0118	0.0142
Chilled cast iron	≤ 38	≤ 354								
	≤ 20	≤ 220	50	0.0002	0.0003	0.0005	0.0008	0.0013	0.0018	0.0024
New cast materials GGV	≤ 32	≤ 301								
	≤ 32	≤ 301								
New cast materials ADI	≤ 32	≤ 301								
	≤ 43	≤ 402								
Special alloys	≤ 54	≤ 549								
Ti and Ti-alloys	≤ 25	≤ 255	35	0.0002	0.0003	0.0005	0.0008	0.0013	0.0018	0.0024
	≤ 43	≤ 402	50	0.0002	0.0003	0.0005	0.0008	0.0013	0.0018	0.0024
Aluminium and Al-alloys	-	≤ 120	230	0.0024	0.0035	0.0047	0.0071	0.0094	0.0118	0.0142
Al wrought alloys	-	≤ 200	230	0.0024	0.0035	0.0047	0.0071	0.0094	0.0118	0.0142
Al cast alloys ≤ 10 % Si	-	≤ 180	445	0.0009	0.0013	0.0017	0.0026	0.0036	0.0047	0.0059
	-	≤ 24 % Si	445	0.0009	0.0013	0.0017	0.0026	0.0036	0.0047	0.0059
Magnesium alloys	-	≤ 120								
Copper, low-alloyed	-	≤ 150								
Brass, short-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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Free-cutting steels	≤ 25	≤ 255	330	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094
	≤ 32	≤ 301	295	0.0014	0.0020	0.0028	0.0039	0.0055	0.0067	0.0083
Unalloyed heat-treatable steels	≤ 20	≤ 220	295	0.0016	0.0024	0.0031	0.0047	0.0063	0.0079	0.0094
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Alloyed heat-treatable steels	≤ 32	≤ 301	295	0.0014	0.0020	0.0028	0.0039	0.0055	0.0067	0.0083
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	≤ 43	≤ 402	195	0.0012	0.0016	0.0016	0.0035	0.0047	0.0059	0.0071
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	≤ 38	≤ 354	395	0.0020	0.0031	0.0039	0.0059	0.0083	0.0102	0.0122
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