

ISO	Material	Tensile strength (N/mm ²)	Cutting speed V _c (m/min)					
			coated			uncoated		
			AMS140	AP5020	PVD1	AK10	AN1015	
P	Unalloyed steel and cast steel	< 0.15 % C/hardened and tempered	350	120–200	120–220	100–130	–	–
		0.15 – 0.45 % C/hardened and tempered	650	80–150	80–150	–	–	–
		> 0.45 % C/hardened and tempered	1000	60–140	60–140	60–100	–	–
	Low alloyed steel and cast steel	annealed	600	80–160	80–170	70–110	–	–
		hardened and tempered	900	60–130	60–130	60–100	–	–
			1200	60–120	60–120	50–70	–	–
	High alloyed steel	annealed	700	80–140	80–140	70–110	–	–
	High alloyed tool steel and cast steel	hardened	1100	50–120	50–120	50–70	–	–
Stainless steel	ferritic, annealed	700	60–160	60–170	130–200	–	–	
Cast steel	martensitic, hardened and tempered	1000	50–100	50–100	60–90	–	–	
M	Stainless steel	austenitic and austenitic/ ferritic, chilled	450–600	60–160	60–180	130–200	–	–
		600–900	50–90	50–90	60–90	–	–	
K	Cast iron	pearlitic/ferritic	500–700	–	–	140–180	100–180	120–160
		pearlitic/martensitic	700–850	–	–	110–140	90–120	100–150
			800–1100	–	–	100–140	80–120	90–140
	Cast iron with nodular graphite	ferritic	550	–	–	120–160	100–140	130–170
		pearlitic	800	–	–	100–140	80–120	90–130
	Malleable cast iron	ferritic	450	–	–	140–200	70–90	140–200
pearlitic	750	–	–	120–160	60–70	120–160		
N	Aluminium alloys long chipping	not heat treatable	200	–	100–500	100–800	650–1000	300–500
		heat treatable, heat treated	350	–	100–300	100–600	300–700	200–300
	Casted aluminium alloys	≤ 12 % Si, heat treated	250	–	100–500	100–400	200–600	100–500
		≤ 12 % Si, heat treatable, heat treated	300	–	100–300	100–400	150–400	100–300
		≤ 12 % Si, not heat treatable	450	–	100–200	100–400	100–300	100–200
	Copper and copper alloys (Brass/Bronze)	Lead alloys, Pb > 1 %	400	–	100–500	80–300	250–600	250–500
		Brass, Bronze	300	–	100–500	150–600	205–400	200–500
		Aluminium bronze	500	–	100–300	100–400	250–500	150–300
		Copper and elektrolyte copper	200	–	100–300	80–300	130–300	150–300
	Non-ferrous materials	Duroplastic	–	–	80–180	80–400	80–500	80–180
Re-inforced plastics		–	–	60–150	80–160	60–150	80–200	
Hard rubber		–	–	100–220	100–300	100–250	100–200	
S	High temperature resistant alloys	Fe-alloyed, annealed	700	–	20–50	25–40	10–30	70–110
		Fe-alloyed, heat treated	950	–	20–40	20–28	15–30	30–60
		Ni- or Co-alloyed, annealed	800	–	15–25	12–20	15–30	50–70
		Ni- or Co-alloyed, casting	1100	–	10–20	8–16	–	50–70
		Ni- or Co-alloyed, heat treated	1200	–	10–20	8–20	–	50–80
	Titanium alloys	Pure titan	500–700	–	50–120	–	15–50	110–160
Alpha- and Beta-alloys	heat treated	700–1000	–	30–50	–	40–70	25–50	
H	Hardened steel	hardened	55 HRC	–	–	–	–	–
		60 HRC	–	–	–	–	–	
	Hard cast iron	casting	41 HRC	–	–	–	–	–
	Hardened cast iron	hardened	55 HRC	–	–	–	–	–

The recommended cutting data are only approximate values.
It may be necessary to adjust them to each individual machining application.