

ISO	Material		Brinell hardness HB	Cutting speed Vc [m/min]							
				AM5035	AK2015	AL10	AL350	AM35C	AR26C	AK10	AP40
P	Unalloyed steel and cast steel	ca. 0,15% C annealed	340	120-230	120-220	200-300	120-230	140-250	150-280	-	80-140
		ca. 0,45% C annealed	640	80-160	100-160	170-280	80-160	100-180	120-200	-	70-100
		ca. 0,45% C hardened and tempered	830	80-160	100-160	160-250	80-160	100-180	120-200	-	70-100
		ca. 0,75% C annealed	900	60-130	80-140	150-250	60-130	80-150	100-180	-	60-100
		ca. 0,75% C hardened and tempered	1000	50-130	80-130	150-250	50-130	70-150	100-170	-	50-100
	Low alloyed steel and cast steel	annealed	600	80-160	100-160	170-270	80-160	100-180	120-200	-	60-100
		hardened and tempered	920	60-130	70-130	160-250	60-130	80-150	90-160	-	50-90
		hardened and tempered	1000	60-120	60-130	150-250	60-120	80-150	80-160	-	50-80
		hardened and tempered	1170	60-100	60-110	150-220	60-100	70-120	80-140	-	50-80
	High alloyed steel, high alloyed tool-steel and cast steel	annealed	670	80-140	90-140	-	80-140	100-160	110-180	-	60-80
		hardened and tempered	1100	50-100	60-110	-	50-100	60-120	80-140	-	-
	Stainless steel and cast steel	ferritic / martensitic, annealed	670	50-200	-	160-280	50-200	100-180	-	-	-
		martensitic, hardened and tempered	1000	50-150	-	140-280	50-150	80-150	-	-	-
M	Stainless steel and cast steel	austenitic and austenitic/ferritic, chilled	450-600	50-190	-	140-280	50-190	100-190	-	-	50-150
			600-900	50-100	-	-	50-100	-	-	-	40-90
K	Cast iron	pearlitic, ferritic	500-700	-	140-240	170-300	-	-	120-200	100-150	-
		pearlitic, martensitic	700-850	-	140-240	150-270	-	-	120-200	100-150	-
			800-1100	-	120-190	120-240	-	-	100-160	80-120	-
	Cast iron with nodular graphite	ferritic	550	-	130-240	140-230	-	-	110-200	100-140	-
		pearlitic	800	-	130-240	120-170	-	-	110-200	100-140	-
	Malleable cast iron	ferritic	450	-	120-240	150-200	-	-	100-200	100-160	-
		pearlitic	750	-	120-240	140-200	-	-	100-200	100-160	-
N	Aluminium alloys, long chipping	not heat treatable	200	-	-	800-1300	-	-	-	100-500	-
		heat treatable, heat - treated	350	-	-	400-900	-	-	-	100-300	-
	Casted aluminium alloys	≤ 12% Si, hardened	250	-	-	250-800	-	-	-	100-500	-
		≤ 12% Si, heat treatable, hardened	300	-	-	200-550	-	-	-	100-300	-
		≤ 12% Si, not heat treatable	450	-	-	200-550	-	-	-	100-300	-
	Copper and copper alloys (brass / bronze)	Lead alloys, Pb > 1%	400	-	-	-	-	-	-	100-500	-
		Brass, bronze	300	-	-	-	-	-	-	100-500	-
		Aluminium bronze	500	-	-	-	-	-	-	100-300	-
		Copper and electrolyte copper	200	-	-	-	-	-	-	100-300	-
	Non ferrous materials	Duroplastics		-	-	-	-	-	-	80-180	-
		Re - inforced plastics		-	-	-	-	-	-	60-150	-
		Hard rubber		-	-	-	-	-	-	100-250	-
S	High temperature resistant alloys	Fe-alloyed annealed	700	20-50	-	20-50	20-50	-	-	-	-
		heat - treated	950	20-40	-	20-50	20-40	-	-	-	-
		Ni- or annealed	800	15-25	-	15-40	15-25	-	-	-	-
		Co based casting	1100	10-20	-	15-30	10-20	-	-	-	-
		heat - treated	1200	10-20	-	15-30	10-20	-	-	-	-
	Titanium alloys, high strength Alpha- and Beta- alloys, hardened	Pure titan	500-700	50-120	-	-	50-120	-	-	50-120	-
H	Hardened steel	hardened and tempered	1000-1350	-	-	-	-	-	-	-	-
		hardened and tempered	1350-1700	-	-	-	-	-	-	-	-
	Hard cast iron	casting	1350	-	-	-	-	-	-	-	-
	Hardened cast iron	hardened and tempered	1900	-	-	-	-	-	-	-	-

The datas given are only approximate values. It can be necessary to adjust these datas to the individual machining operation.