

ISO	Material		Condition	Tensile strength (N/mm ²)	Hardness HB	Material No.	Cutting speed Vc(m/min)			
							Coated			
							TT4410	TT4430	TT9020	
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	170-380	160-370	150-350	
		≥0.25%C	Annealed	650	190	2	170-340	160-340	150-320	
		<0.55%C	Quenched and tempered	850	250	3	150-270	140-270	130-250	
		≥0.55%C	Annealed	750	220	4	170-270	160-270	140-260	
			Quenched and tempered	1000	300	5	150-250	140-250	130-230	
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed		600	200	6	150-270	140-270	130-250
					930	275	7	60-130	60-130	50-130
			Quenched and tempered		1000	300	8	50-100	50-100	40-100
					1200	350	9	30-100	30-100	30-100
	High alloy steel, cast steel and tool steel		Annealed		680	200	10	60-180	60-180	60-180
			Quenched and tempered		1100	325	11	40-80	40-80	40-80
M	Stainless steel and cast steel		Ferritic / martensitic		680	200	12	150-380	120-270	120-270
			Martensitic		820	240	13	150-270	120-250	120-250
			Austenitic		600	180	14	90-240	90-220	90-220
S	High temp. alloys	Fe based	Annealed			200	31	40-170	40-160	
			Cured			280	32	40-150	30-130	
		Ni or Co based	Annealed			250	33	45-90	35-80	
			Cured			350	34	30-80	30-70	
			Cast			320	35	30-80	30-60	
	Titanium, Ti alloys				Rm 400		36	110-190	90-180	
Alpha+beta alloys cured				Rm 1050		37	50-90	40-80		