

Material group	Description	Content	Tensile strength Rm (MPa)*	Hardness (HB)	Hardness (HRC)
P0	Low-carbon steel, long-chipping	C <0,25 %	<530	<125	–
P1	Low-carbon steel, short-chipping, easy to machine	C <0,25 %	<530	<125	–
P2	Medium and high carbon steel	C >0,25 %	>530	<220	<25
P3	Medium and high carbon steel	C >0,25 %	600–850	<330	<35
P4	Alloy steel and tool steel	C >0,25 %	850–1400	340–450	35–48
P5	Ferritic, martensitic and stainless PH steel	–	600–900	<330	<35
P6	High strength ferritic, martensitic and PH stainless steel	–	900–1350	350–450	35–48
M1	Austenitic stainless steel	–	<600	130–200	–
M2	High strength austenitic stainless steel and cast stainless steel	–	600–800	150–230	<25
M3	Duplex stainless steel	–	<800	135–275	<30
K1	Cast iron	–	125–500	120–290	<32
K2	Ductile iron (nodular iron) with low to medium strength and compacted iron	–	<600	130–260	<28
K3	High-strength cast iron and bainitic ductile iron (ADI)	–	>600	180–350	<43
N1	Wrought aluminium alloys	–	–	–	–
N2	Low silicon aluminium alloys and magnesium alloys	Si-Gehalt<12,2 %	–	–	–
N3	Aluminium alloys with high silicon content and magnesium alloys	Si-Gehalt>12,2 %	–	–	–
N4	Copper, brass and zinc base with a machinability index of 70-100	–	–	–	–
N5	Nylon, plastics, rubber, phenolics and fiberglass	–	–	–	–
N6	Carbon fibre and graphite materials, CFRP	–	–	–	–
N7	Metal Matrix Material (MMC)	–	–	–	–
S1	Iron-based heat-resistant alloys	–	500–1200	160–260	25–48
S2	Cobalt-based heat-resistant alloys	–	1000–1450	250–450	25–48
S3	Nickel-based heat heat-resistant alloys	–	600–1700	160–450	<48
S4	Titanium and titanium alloys	–	900–1600	300–400	33–48
H1	Hardened materials	–	–	–	44–48
H2	Hardened materials	–	–	–	48–55
H3	Hardened materials	–	–	–	56–60
H4	Hardened materials	–	–	–	>60
C1	CFRP, CFRP/CFRP	–	–	–	–
C2	CFRP/NF metals	–	–	–	–
C3	CFRP/High Temperature	–	–	–	–
C4	CFRP/stainless steel	–	–	–	–
C5	CFRP/NF-metals/heat resistant	–	–	–	–