Taper length drills

Series no. **501**

Tool material **HSS**

Surface

~10xD Cutting depth | DIN 340 Standard | GT 50 Type | 130° Point angle | h8 Tolerance on Ø | Web Thinning | Cyl Shank form | R Cutting direction

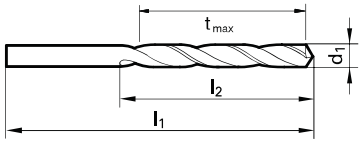
P	Steel	○
M	Stainless steel	
K	Cast iron	
N	Aluminum	●
S	Titanium alloys	
H	Hardened steel	

●=Optimal
○=Limited

web thinning ≥ Ø 2.370 • relieved cone • especially large flute

soft, long chipping materials up to 500 N/mm² • mild steels • aluminum, Al-alloys (long-chipping) • zinc, refined copper, silumin, Elektron • zamak, argalium, soft plastics, wood

$t_{max} = l_2 - 1.5 \times d_1$



Speeds and feeds information on pg. 493

Shank diameter = cut diameter

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.0394		1.00	56.00	31.50	33.00	9005010010000
0.0402	#60	1.02	56.00	31.47	33.00	9005010010200
0.0409	#59	1.04	56.00	31.44	33.00	9005010010400
0.0413		1.05	56.00	31.43	33.00	9005010010500
0.0421	#58	1.07	60.00	35.40	37.00	9005010010700
0.0429	#57	1.09	60.00	35.37	37.00	9005010010900
0.0433		1.10	60.00	35.35	37.00	9005010011000
0.0453		1.15	60.00	35.28	37.00	9005010011500
0.0465	#56	1.18	60.00	35.23	37.00	9005010011800
0.0469	3/64	1.19	65.00	39.22	41.00	9005010011900
0.0472		1.20	65.00	39.20	41.00	9005010012000
0.0492		1.25	65.00	39.13	41.00	9005010012500
0.0512		1.30	65.00	39.05	41.00	9005010013000
0.0520	#55	1.32	65.00	39.02	41.00	9005010013200
0.0551	#54	1.40	70.00	42.90	45.00	9005010014000
0.0591		1.50	70.00	42.75	45.00	9005010015000
0.0594	#53	1.51	76.00	47.74	50.00	9005010015100
0.0610		1.55	76.00	47.68	50.00	9005010015500
0.0626	1/16	1.59	76.00	47.62	50.00	9005010015900
0.0630		1.60	76.00	47.60	50.00	9005010016000
0.0634	#52	1.61	76.00	47.59	50.00	9005010016100
0.0669	#51	1.70	76.00	47.45	50.00	9005010017000
0.0689		1.75	80.00	50.38	53.00	9005010017500
0.0701	#50	1.78	80.00	50.33	53.00	9005010017800
0.0709		1.80	80.00	50.30	53.00	9005010018000
0.0728	#49	1.85	80.00	50.23	53.00	9005010018500
0.0748		1.90	80.00	50.15	53.00	9005010019000
0.0768		1.95	85.00	53.08	56.00	9005010019500
0.0780	5/64	1.98	85.00	53.03	56.00	9005010019800
0.0783	#47	1.99	85.00	53.02	56.00	9005010019900
0.0787		2.00	85.00	53.00	56.00	9005010020000
0.0807		2.05	85.00	52.93	56.00	9005010020500
0.0811	#46	2.06	85.00	52.91	56.00	9005010020600
0.0819	#45	2.08	85.00	52.88	56.00	9005010020800
0.0827		2.10	85.00	52.85	56.00	9005010021000
0.0846		2.15	90.00	55.78	59.00	9005010021500
0.0858	#44	2.18	90.00	55.73	59.00	9005010021800
0.0866		2.20	90.00	55.70	59.00	9005010022000
0.0886		2.25	90.00	55.63	59.00	9005010022500

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.0890	#43	2.26	90.00	55.61	59.00	9005010022600
0.0906		2.30	90.00	55.55	59.00	9005010023000
0.0925		2.35	90.00	55.48	59.00	9005010023500
0.0933	#42	2.37	95.00	58.45	62.00	9005010023700
0.0937	3/32	2.38	95.00	58.43	62.00	9005010023800
0.0945		2.40	95.00	58.40	62.00	9005010024000
0.0961	#41	2.44	95.00	58.34	62.00	9005010024400
0.0965		2.45	95.00	58.33	62.00	9005010024500
0.0980	#40	2.49	95.00	58.27	62.00	9005010024900
0.0984		2.50	95.00	58.25	62.00	9005010025000
0.0992		2.52	95.00	58.22	62.00	9005010025200
0.0996	#39	2.53	95.00	58.21	62.00	9005010025300
0.1004		2.55	95.00	58.18	62.00	9005010025500
0.1016	#38	2.58	95.00	58.13	62.00	9005010025800
0.1024		2.60	95.00	58.10	62.00	9005010026000
0.1039	#37	2.64	95.00	58.04	62.00	9005010026400
0.1063		2.70	100.00	61.95	66.00	9005010027000
0.1067	#36	2.71	100.00	61.94	66.00	9005010027100
0.1083		2.75	100.00	61.88	66.00	9005010027500
0.1094	7/64	2.78	100.00	61.83	66.00	9005010027800
0.1098	#35	2.79	100.00	61.82	66.00	9005010027900
0.1102		2.80	100.00	61.80	66.00	9005010028000
0.1110	#34	2.82	100.00	61.77	66.00	9005010028200
0.1122		2.85	100.00	61.73	66.00	9005010028500
0.1130	#33	2.87	100.00	61.70	66.00	9005010028700
0.1142		2.90	100.00	61.65	66.00	9005010029000
0.1161	#32	2.95	100.00	61.58	66.00	9005010029500
0.1181		3.00	100.00	61.50	66.00	9005010030000
0.1201	#31	3.05	106.00	64.43	69.00	9005010030500
0.1220		3.10	106.00	64.35	69.00	9005010031000
0.1248	1/8	3.17	106.00	64.25	69.00	9005010031700
0.1260		3.20	106.00	64.20	69.00	9005010032000
0.1280		3.25	106.00	64.13	69.00	9005010032500
0.1283	#30	3.26	106.00	64.11	69.00	9005010032600
0.1299		3.30	106.00	64.05	69.00	9005010033000
0.1319		3.35	106.00	63.98	69.00	9005010033500
0.1339		3.40	112.00	67.90	73.00	9005010034000
0.1358	#29	3.45	112.00	67.83	73.00	9005010034500
0.1378		3.50	112.00	67.75	73.00	9005010035000

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Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.1406	9/64	3.57	112.00	67.65	73.00	9005010035700
0.1417	#28	3.60	112.00	67.60	73.00	9005010036000
0.1437		3.65	112.00	67.53	73.00	9005010036500
0.1441	#27	3.66	112.00	67.51	73.00	9005010036600
0.1457		3.70	112.00	67.45	73.00	9005010037000
0.1496	#25	3.80	119.00	72.30	78.00	9005010038000
0.1520	#24	3.86	119.00	72.21	78.00	9005010038600
0.1535		3.90	119.00	72.15	78.00	9005010039000
0.1539	#23	3.91	119.00	72.14	78.00	9005010039100
0.1563	5/32	3.97	119.00	72.05	78.00	9005010039700
0.1571	#22	3.99	119.00	72.02	78.00	9005010039900
0.1575		4.00	119.00	72.00	78.00	9005010040000
0.1591	#21	4.04	119.00	71.94	78.00	9005010040400
0.1610	#20	4.09	119.00	71.87	78.00	9005010040900
0.1614		4.10	119.00	71.85	78.00	9005010041000
0.1654		4.20	119.00	71.70	78.00	9005010042000
0.1661	#19	4.22	119.00	71.67	78.00	9005010042200
0.1673		4.25	119.00	71.63	78.00	9005010042500
0.1693	#18	4.30	126.00	75.55	82.00	9005010043000
0.1720	11/64	4.37	126.00	75.45	82.00	9005010043700
0.1728	#17	4.39	126.00	75.42	82.00	9005010043900
0.1732		4.40	126.00	75.40	82.00	9005010044000
0.1772	#16	4.50	126.00	75.25	82.00	9005010045000
0.1799	#15	4.57	126.00	75.15	82.00	9005010045700
0.1811		4.60	126.00	75.10	82.00	9005010046000
0.1819	#14	4.62	126.00	75.07	82.00	9005010046200
0.1850	#13	4.70	126.00	74.95	82.00	9005010047000
0.1870		4.75	126.00	74.88	82.00	9005010047500
0.1874	3/16	4.76	132.00	79.86	87.00	9005010047600
0.1890	#12	4.80	132.00	79.80	87.00	9005010048000
0.1909	#11	4.85	132.00	79.73	87.00	9005010048500
0.1929		4.90	132.00	79.65	87.00	9005010049000
0.1937	#10	4.92	132.00	79.62	87.00	9005010049200
0.1961	#9	4.98	132.00	79.53	87.00	9005010049800
0.1969		5.00	132.00	79.50	87.00	9005010050000
0.1988		5.05	132.00	79.43	87.00	9005010050500
0.1992	#8	5.06	132.00	79.41	87.00	9005010050600
0.2008		5.10	132.00	79.35	87.00	9005010051000
0.2012	#7	5.11	132.00	79.34	87.00	9005010051100
0.2031	13/64	5.16	132.00	79.26	87.00	9005010051600
0.2039	#6	5.18	132.00	79.23	87.00	9005010051800
0.2047		5.20	132.00	79.20	87.00	9005010052000
0.2055	#5	5.22	132.00	79.17	87.00	9005010052200
0.2087		5.30	132.00	79.05	87.00	9005010053000
0.2091	#4	5.31	139.00	83.04	91.00	9005010053100
0.2126		5.40	139.00	82.90	91.00	9005010054000
0.2130	#3	5.41	139.00	82.89	91.00	9005010054100
0.2165		5.50	139.00	82.75	91.00	9005010055000
0.2189	7/32	5.56	139.00	82.66	91.00	9005010055600
0.2205		5.60	139.00	82.60	91.00	9005010056000
0.2209	#2	5.61	139.00	82.59	91.00	9005010056100
0.2244		5.70	139.00	82.45	91.00	9005010057000
0.2280	#1	5.79	139.00	82.32	91.00	9005010057900
0.2283		5.80	139.00	82.30	91.00	9005010058000
0.2323		5.90	139.00	82.15	91.00	9005010059000
0.2339	A	5.94	139.00	82.09	91.00	9005010059400
0.2343	15/64	5.95	139.00	82.08	91.00	9005010059500
0.2362		6.00	139.00	82.00	91.00	9005010060000
0.2378	B	6.04	148.00	87.94	97.00	9005010060400
0.2402		6.10	148.00	87.85	97.00	9005010061000
0.2421	C	6.15	148.00	87.78	97.00	9005010061500
0.2441		6.20	148.00	87.70	97.00	9005010062000
0.2461	D	6.25	148.00	87.63	97.00	9005010062500
0.2480		6.30	148.00	87.55	97.00	9005010063000
0.2500	1/4	6.35	148.00	87.48	97.00	9005010063500
0.2520	E	6.40	148.00	87.40	97.00	9005010064000
0.2559		6.50	148.00	87.25	97.00	9005010065000
0.2571		6.53	148.00	87.21	97.00	9005010065300
0.2598		6.60	148.00	87.10	97.00	9005010066000
0.2610	G	6.63	148.00	87.06	97.00	9005010066300
0.2638		6.70	148.00	86.95	97.00	9005010067000
0.2657	17/64	6.75	156.00	91.88	102.00	9005010067500
0.2677	H	6.80	156.00	91.80	102.00	9005010068000
0.2717		6.90	156.00	91.65	102.00	9005010069000
0.2756	I	7.00	156.00	91.50	102.00	9005010070000
0.2772		7.04	156.00	91.44	102.00	9005010070400
0.2795		7.10	156.00	91.35	102.00	9005010071000
0.2811	9/32	7.14	156.00	91.29	102.00	9005010071400
0.2835	K	7.20	156.00	91.20	102.00	9005010072000
0.2874		7.30	156.00	91.05	102.00	9005010073000
0.2902	L	7.37	156.00	90.95	102.00	9005010073700
0.2913		7.40	156.00	90.90	102.00	9005010074000
0.2949	M	7.49	156.00	90.77	102.00	9005010074900
0.2953		7.50	156.00	90.75	102.00	9005010075000
0.2969	19/64	7.54	165.00	97.69	109.00	9005010075400
0.2992		7.60	165.00	97.60	109.00	9005010076000
0.3020	N	7.67	165.00	97.50	109.00	9005010076700
0.3031		7.70	165.00	97.45	109.00	9005010077000
0.3071		7.80	165.00	97.30	109.00	9005010078000
0.3110		7.90	165.00	97.15	109.00	9005010079000
0.3126	5/16	7.94	165.00	97.09	109.00	9005010079400
0.3150		8.00	165.00	97.00	109.00	9005010080000
0.3161	O	8.03	165.00	96.96	109.00	9005010080300
0.3189		8.10	165.00	96.85	109.00	9005010081000
0.3228	P	8.20	165.00	96.70	109.00	9005010082000
0.3268		8.30	165.00	96.55	109.00	9005010083000
0.3280	21/64	8.33	165.00	96.51	109.00	9005010083300
0.3307		8.40	165.00	96.40	109.00	9005010084000
0.3319	Q	8.43	165.00	96.36	109.00	9005010084300
0.3346		8.50	165.00	96.25	109.00	9005010085000
0.3386		8.60	175.00	102.10	115.00	9005010086000
0.3390	R	8.61	175.00	102.09	115.00	9005010086100
0.3425		8.70	175.00	101.95	115.00	9005010087000
0.3437	11/32	8.73	175.00	101.91	115.00	9005010087300
0.3465		8.80	175.00	101.80	115.00	9005010088000
0.3504		8.90	175.00	101.65	115.00	9005010089000
0.3543		9.00	175.00	101.50	115.00	9005010090000
0.3579	T	9.09	175.00	101.37	115.00	9005010090900
0.3583		9.10	175.00	101.35	115.00	9005010091000
0.3594	23/64	9.13	175.00	101.31	115.00	9005010091300
0.3622		9.20	175.00	101.20	115.00	9005010092000
0.3661		9.30	175.00	101.05	115.00	9005010093000
0.3677	U	9.34	175.00	100.99	115.00	9005010093400
0.3681		9.35	175.00	100.98	115.00	9005010093500
0.3701		9.40	175.00	100.90	115.00	9005010094000
0.3740		9.50	175.00	100.75	115.00	9005010095000
0.3748	3/8	9.52	184.00	106.72	121.00	9005010095200
0.3772	V	9.58	184.00	106.63	121.00	9005010095800
0.3780		9.60	184.00	106.60	121.00	9005010096000
0.3858	W	9.80	184.00	106.30	121.00	9005010098000
0.3898		9.90	184.00	106.15	121.00	9005010099000
0.3906	25/64	9.92	184.00	106.12	121.00	9005010099200
0.3937		10.00	184.00	106.00	121.00	9005010100000
0.3969	X	10.08	184.00	105.88	121.00	9005010100800
0.3976		10.10	184.00	105.85	121.00	9005010101000
0.4016		10.20	184.00	105.70	121.00	9005010102000

Taper length drills

Series no. **501**

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.4039	Y	10.26	184.00	105.61	121.00	**9005010102600**
0.4055		10.30	184.00	105.55	121.00	**9005010103000**
0.4063	13/32	10.32	184.00	105.52	121.00	**9005010103200**
0.4094		10.40	184.00	105.40	121.00	**9005010104000**
0.4134		10.50	184.00	105.25	121.00	**9005010105000**
0.4173		10.60	184.00	105.10	121.00	**9005010106000**
0.4213		10.70	195.00	111.95	128.00	**9005010107000**
0.4220	27/64	10.72	195.00	111.92	128.00	**9005010107200**
0.4252		10.80	195.00	111.80	128.00	**9005010108000**
0.4331		11.00	195.00	111.50	128.00	**9005010110000**
0.4374	7/16	11.11	195.00	111.34	128.00	**9005010111100**
0.4409		11.20	195.00	111.20	128.00	**9005010112000**
0.4449		11.30	195.00	111.05	128.00	**9005010113000**
0.4488		11.40	195.00	110.90	128.00	**9005010114000**
0.4528		11.50	195.00	110.75	128.00	**9005010115000**
0.4531	29/64	11.51	195.00	110.74	128.00	**9005010115100**

Diameter (d_1) inch	wire/ltr	mm	l_1 mm	t_{max} mm	l_2 mm	EDP #
0.4567		11.60	195.00	110.60	128.00	**9005010116000**
0.4626		11.75	195.00	110.38	128.00	**9005010117500**
0.4646		11.80	195.00	110.30	128.00	**9005010118000**
0.4685		11.90	205.00	116.15	134.00	**9005010119000**
0.4689	15/32	11.91	205.00	116.14	134.00	**9005010119100**
0.4724		12.00	205.00	116.00	134.00	**9005010120000**
0.4803		12.20	205.00	115.70	134.00	**9005010122000**
0.4843	31/64	12.30	205.00	115.55	134.00	**9005010123000**
0.4921		12.50	205.00	115.25	134.00	**9005010125000**
0.5000	1/2	12.70	205.00	114.95	134.00	**9005010127000**
0.5118		13.00	205.00	114.50	134.00	**9005010130000**
0.5157	33/64	13.10	205.00	114.35	134.00	**9005010131000**
0.5311	17/32	13.49	214.00	119.77	140.00	**9005010134900**
0.5469	35/64	13.89	214.00	119.17	140.00	**9005010138900**
0.5512		14.00	214.00	119.00	140.00	**9005010140000**

Series # 390

Material group	Hardness HRc	Hardness Bhn	SFM	Feed Rate - IPR 1/16 in. 1.590 mm	1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm	1 1/4 in. 31.750 mm	1 1/2 in. 38.100 mm
Common structural steels	-	≤ 150	130		0.0050	0.0080	0.0100	0.0125	0.0125				
	≤ 32	≤ 301	95		0.0040	0.0065	0.0080	0.0100	0.0100				
Free-cutting steels	≤ 25	≤ 255	130		0.0050	0.0080	0.0100	0.0125	0.0125				
	≤ 32	≤ 301	95		0.0040	0.0065	0.0080	0.0100	0.0100				
Unalloyed heat-treatable steels	≤ 20	≤ 220	130		0.0040	0.0065	0.0080	0.0100	0.0100				
	≤ 25	≤ 255	95		0.0040	0.0065	0.0080	0.0100	0.0100				
	≤ 32	≤ 301	70		0.0030	0.0050	0.0065	0.0080	0.0080				
Alloyed heat-treatable steels	≤ 32	≤ 301	65		0.0030	0.0050	0.0065	0.0080	0.0080				
	≤ 43	≤ 402	45		0.0025	0.0040	0.0050	0.0065	0.0065				
Unalloyed case hardened steels	≤ 25	≤ 255	130		0.0050	0.0080	0.0100	0.0125	0.0125				
Alloyed case hardened steels	≤ 32	≤ 301	55		0.0030	0.0050	0.0065	0.0080	0.0080				
	≤ 43	≤ 402	35		0.0025	0.0040	0.0050	0.0065	0.0065				
Nitriding steels	≤ 32	≤ 301	45		0.0030	0.0050	0.0065	0.0080	0.0080				
	≤ 43	≤ 402	30		0.0025	0.0040	0.0050	0.0065	0.0065				
Tool steels	≤ 25	≤ 255	65		0.0030	0.0050	0.0065	0.0080	0.0080				
	≤ 43	≤ 402	30		0.0025	0.0040	0.0050	0.0065	0.0065				
High speed steels	≤ 43	≤ 402	30		0.0025	0.0040	0.0050	0.0065	0.0065				
Spring steels	≤ 38	≤ 354	20		0.0020	0.0030	0.0040	0.0050	0.0050				
Hardened steels	≤ 48	≤ 460	10		0.0020	0.0030	0.0040	0.0050	0.0050				
	≤ 66	-	•										
Stainless steels, sulphured	≤ 28	≤ 273	45		0.0030	0.0050	0.0065	0.0080	0.0080				
austenitic	≤ 36	≤ 337	30		0.0025	0.0040	0.0050	0.0065	0.0065				
martensitic	≤ 46	≤ 435	35		0.0025	0.0040	0.0050	0.0065	0.0065				
Cast iron	≤ 23	≤ 242	130		0.0050	0.0080	0.0100	0.0125	0.0125				
	≤ 38	≤ 354	95		0.0050	0.0080	0.0100	0.0125	0.0125				
Spheroidal graphite iron and	≤ 23	≤ 242	110		0.0050	0.0080	0.0100	0.0125	0.0125				
malleable cast iron	≤ 38	≤ 354	80		0.0050	0.0080	0.0100	0.0125	0.0125				
Chilled cast iron	≤ 38	≤ 354	20		0.0025	0.0040	0.0050	0.0065	0.0065				
New cast materials GGV	≤ 20	≤ 220											
	≤ 32	≤ 301											
New cast materials ADI	≤ 32	≤ 301											
	≤ 43	≤ 402											
Special alloys	≤ 54	≤ 549	15		0.0015	0.0025	0.0030	0.0040	0.0040				
Ti and Ti-alloys	≤ 25	≤ 255	30		0.0020	0.0030	0.0040	0.0050	0.0050				
	≤ 43	≤ 402	15		0.0020	0.0030	0.0040	0.0050	0.0050				
Aluminium and Al-alloys	-	≤ 120											
Al wrought alloys	-	≤ 200											
Al cast alloys ≤ 10 % Si	-	≤ 180	245		0.0065	0.0100	0.0125	0.0160	0.0160				
≤ 24 % Si	-	≤ 180	195		0.0050	0.0080	0.0100	0.0125	0.0125				
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150	130		0.0040	0.0065	0.0080	0.0100	0.0100				
Brass, short-chipping	-	≤ 180											
long-chipping	-	≤ 180	160		0.0040	0.0065	0.0080	0.0100	0.0100				
Bronze, short-chipping	-	≤ 180											
	≤ 25	≤ 255	110		0.0030	0.0050	0.0065	0.0080	0.0080				
Bronze, long-chipping	≤ 25	≤ 255	95		0.0030	0.0050	0.0065	0.0080	0.0080				
	≤ 32	≤ 301	80		0.0030	0.0050	0.0065	0.0080	0.0080				
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK			95		0.0040	0.0065	0.0080	0.0100	0.0100				

Series # 501

Material group	Hardness HRc	Hardness Bhn	SFM	Feed Rate - IPR 1/16 in. 1.590 mm	1/8 in. 3.170 mm	1/4 in. 6.350 mm	3/8 in. 9.520 mm	1/2 in. 12.700 mm	5/8 in. 15.870 mm	3/4 in. 19.050 mm	1 in. 25.400 mm	1 1/4 in. 31.750 mm	1 1/2 in. 38.100 mm
Common structural steels	-	≤ 150											
	≤ 32	≤ 301											
Free-cutting steels	≤ 25	≤ 255											
	≤ 32	≤ 301											
Unalloyed heat-treatable steels	≤ 20	≤ 220											
	≤ 25	≤ 255											
	≤ 32	≤ 301											
Alloyed heat-treatable steels	≤ 32	≤ 301											
	≤ 43	≤ 402											
Unalloyed case hardened steels	≤ 25	≤ 255											
Alloyed case hardened steels	≤ 32	≤ 301											
	≤ 43	≤ 402											
Nitriding steels	≤ 32	≤ 301											
	≤ 43	≤ 402											
Tool steels	≤ 25	≤ 255											
	≤ 43	≤ 402											
High speed steels	≤ 43	≤ 402											
Spring steels	≤ 38	≤ 354											
Hardened steels	≤ 48	≤ 460											
	≤ 66	-											
Stainless steels, sulphured	≤ 28	≤ 273											
austenitic	≤ 36	≤ 337											
martensitic	≤ 46	≤ 435											
Cast iron	≤ 23	≤ 242											
	≤ 38	≤ 354											
Spheroidal graphite iron and	≤ 23	≤ 242											
malleable cast iron	≤ 38	≤ 354											
Chilled cast iron	≤ 38	≤ 354											
New cast materials GGV	≤ 20	≤ 220											
	≤ 32	≤ 301											
New cast materials ADI	≤ 32	≤ 301											
	≤ 43	≤ 402											
Special alloys	≤ 54	≤ 549											
Ti and Ti-alloys	≤ 25	≤ 255											
	≤ 43	≤ 402											
Aluminium and Al-alloys	-	≤ 120	225	0.0020	0.0065	0.0100	0.0125	0.0160	0.0160				
Al wrought alloys	-	≤ 200	225	0.0020	0.0065	0.0100	0.0125	0.0160	0.0160				
Al cast alloys ≤ 10 % Si	-	≤ 180											
≤ 24 % Si	-	≤ 180											
Magnesium alloys	-	≤ 120	225	0.0017	0.0050	0.0080	0.0100	0.0125	0.0125				
Copper, low-alloyed	-	≤ 150	130	0.0020	0.0065	0.0100	0.0125	0.0160	0.0160				
Brass, short-chipping	-	≤ 180											
long-chipping	-	≤ 180											
Bronze, short-chipping	-	≤ 180											
	≤ 25	≤ 255											
Bronze, long-chipping	≤ 25	≤ 255											
	≤ 32	≤ 301											
Duroplastics Thermoplastics Reinforced plastics - Kevlar Reinforced plastics - GFK / CFK			70	0.0015	0.0040	0.0065	0.0080	0.0100	0.0100				