



Tool material

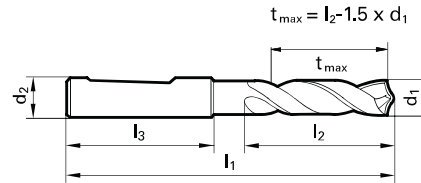
Solid Carbide

Surface



P Steel	●	web thinning $\geq \varnothing 3.000$ • facet point grinding • main cutting edge form straight • optimized cutting geometry
M Stainless steel	○	
K Cast iron	●	structural and case hardened steels • free-cutting steels, heat-treatable steels • alloyed steels up to 1200 N/mm ² • cast materials • bronze, brass • high-alloyed AISi-alloys
N Aluminum	○	
S Titanium alloys	○	
H Hardened steel	○	

●=Optimal
○=Limited



Speeds and feeds information on pg. 532

Diameter (d1)			d2	I1	t _{max}	I2	EDP #	Diameter (d1)			d2	I1	t _{max}	I2	EDP #		
inch	wire/ltr	mm	mm	mm	mm	mm		inch	wire/ltr	mm	mm	mm	mm	mm			
0.1181	1/8	3.00	6.00	62.00	15.50	20.00	9011840030000	0.2500	1/4	E	6.35	8.00	79.00	24.48	34.00	9011840063500	
0.1220		3.10	6.00	62.00	15.35	20.00	9011840031000	0.2520			6.40	8.00	79.00	24.40	34.00	9011840064000	
0.1248		3.17	6.00	62.00	15.25	20.00	9011840031700	0.2559			6.50	8.00	79.00	24.25	34.00	9011840065000	
0.1260		3.20	6.00	62.00	15.20	20.00	9011840032000	0.2598			6.60	8.00	79.00	24.10	34.00	9011840066000	
0.1299	9/64	3.30	6.00	62.00	15.05	20.00	9011840033000	0.2638	17/64	H	6.70	8.00	79.00	23.95	34.00	9011840067000	
0.1339		3.40	6.00	62.00	14.90	20.00	9011840034000	0.2657			6.75	8.00	79.00	23.88	34.00	9011840067500	
0.1378		3.50	6.00	62.00	14.75	20.00	9011840035000	0.2677			6.80	8.00	79.00	23.80	34.00	9011840068000	
0.1406		3.57	6.00	62.00	14.65	20.00	9011840035700	0.2717			6.90	8.00	79.00	23.65	34.00	9011840069000	
0.1417	#28	3.60	6.00	62.00	14.60	20.00	9011840036000	0.2756		I	7.00	8.00	79.00	23.50	34.00	9011840070000	
0.1457		3.70	6.00	62.00	14.45	20.00	9011840037000	0.2795	7.10		8.00	79.00	30.35	41.00	9011840071000		
0.1496		3.80	6.00	66.00	18.30	24.00	9011840038000	0.2811	9/32		K	7.14	8.00	79.00	30.29	41.00	9011840071400
0.1535		3.90	6.00	66.00	18.15	24.00	9011840039000	0.2835	7.20		8.00	79.00	30.20	41.00	9011840072000		
0.1563	5/32	3.97	6.00	66.00	18.05	24.00	9011840039700	0.2874			7.30	8.00	79.00	30.05	41.00	9011840073000	
0.1575		4.00	6.00	66.00	18.00	24.00	9011840040000	0.2913			7.40	8.00	79.00	29.90	41.00	9011840074000	
0.1614		4.10	6.00	66.00	17.85	24.00	9011840041000	0.2953			7.50	8.00	79.00	29.75	41.00	9011840075000	
0.1654		4.20	6.00	66.00	17.70	24.00	9011840042000	0.2969	19/64		7.54	8.00	79.00	29.69	41.00	9011840075400	
0.1693	11/64	4.30	6.00	66.00	17.55	24.00	9011840043000	0.2992			7.60	8.00	79.00	29.60	41.00	9011840076000	
0.1720		4.37	6.00	66.00	17.45	24.00	9011840043700	0.3031			7.70	8.00	79.00	29.45	41.00	9011840077000	
0.1732		4.40	6.00	66.00	17.40	24.00	9011840044000	0.3071			7.80	8.00	79.00	29.30	41.00	9011840078000	
0.1772		4.50	6.00	66.00	17.25	24.00	9011840045000	0.3110			7.90	8.00	79.00	29.15	41.00	9011840079000	
0.1811	#16	4.60	6.00	66.00	17.10	24.00	9011840046000	0.3126	5/16		7.94	8.00	79.00	29.09	41.00	9011840079400	
0.1850		4.70	6.00	66.00	16.95	24.00	9011840047000	0.3150			8.00	8.00	79.00	29.00	41.00	9011840080000	
0.1874		3/16	4.76	6.00	66.00	20.86	28.00	9011840047600	0.3189			8.10	10.00	89.00	34.85	47.00	9011840081000
0.1890		4.80	6.00	66.00	20.80	28.00	9011840048000	0.3228		P	8.20	10.00	89.00	34.70	47.00	9011840082000	
0.1929	#12	4.90	6.00	66.00	20.65	28.00	9011840049000	0.3268			8.30	10.00	89.00	34.55	47.00	9011840083000	
0.1969		5.00	6.00	66.00	20.50	28.00	9011840050000	0.3280	21/64		8.33	10.00	89.00	34.51	47.00	9011840083300	
0.2008		5.10	6.00	66.00	20.35	28.00	9011840051000	0.3307			8.40	10.00	89.00	34.40	47.00	9011840084000	
0.2031		13/64	5.16	6.00	66.00	20.26	28.00	9011840051600	0.3346			8.50	10.00	89.00	34.25	47.00	9011840085000
0.2047	7/32	5.20	6.00	66.00	20.20	28.00	9011840052000	0.3386			8.60	10.00	89.00	34.10	47.00	9011840086000	
0.2087		5.30	6.00	66.00	20.05	28.00	9011840053000	0.3425			8.70	10.00	89.00	33.95	47.00	9011840087000	
0.2126		5.40	6.00	66.00	19.90	28.00	9011840054000	0.3437	11/32		8.73	10.00	89.00	33.91	47.00	9011840087300	
0.2165		5.50	6.00	66.00	19.75	28.00	9011840055000	0.3465			8.80	10.00	89.00	33.80	47.00	9011840088000	
0.2189	15/64	5.56	6.00	66.00	19.66	28.00	9011840055600	0.3504			8.90	10.00	89.00	33.65	47.00	9011840089000	
0.2205		5.60	6.00	66.00	19.60	28.00	9011840056000	0.3543			9.00	10.00	89.00	33.50	47.00	9011840090000	
0.2244		5.70	6.00	66.00	19.45	28.00	9011840057000	0.3583			9.10	10.00	89.00	33.35	47.00	9011840091000	
0.2283		5.80	6.00	66.00	19.30	28.00	9011840058000	0.3594	23/64		9.13	10.00	89.00	33.31	47.00	9011840091300	
0.2323	7/32	5.90	6.00	66.00	19.15	28.00	9011840059000	0.3622			9.20	10.00	89.00	33.20	47.00	9011840092000	
0.2343		5.95	6.00	66.00	19.08	28.00	9011840059500	0.3661			9.30	10.00	89.00	33.05	47.00	9011840093000	
0.2362		6.00	6.00	66.00	19.00	28.00	9011840060000	0.3701			9.40	10.00	89.00	32.90	47.00	9011840094000	
0.2402		6.10	8.00	79.00	24.85	34.00	9011840061000	0.3740			9.50	10.00	89.00	32.75	47.00	9011840095000	
0.2441	3/8	6.20	8.00	79.00	24.70	34.00	9011840062000	0.3748			9.52	10.00	89.00	32.72	47.00	9011840095200	
0.2480		6.30	8.00	79.00	24.55	34.00	9011840063000	0.3780			9.60	10.00	89.00	32.60	47.00	9011840096000	

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.3819	W	9.70	10.00	89.00	32.45	47.00	9011840097000
0.3858		9.80	10.00	89.00	32.30	47.00	9011840098000
0.3898		9.90	10.00	89.00	32.15	47.00	9011840099000
0.3906	25/64	9.92	10.00	89.00	32.12	47.00	9011840099200
0.3937		10.00	10.00	89.00	32.00	47.00	9011840100000
0.3976		10.10	12.00	102.00	39.85	55.00	9011840101000
0.4016	13/32	10.20	12.00	102.00	39.70	55.00	9011840102000
0.4055		10.30	12.00	102.00	39.55	55.00	9011840103000
0.4063		10.32	12.00	102.00	39.52	55.00	9011840103200
0.4094	27/64	10.40	12.00	102.00	39.40	55.00	9011840104000
0.4134		10.50	12.00	102.00	39.25	55.00	9011840105000
0.4173		10.60	12.00	102.00	39.10	55.00	9011840106000
0.4213	7/16	10.70	12.00	102.00	38.95	55.00	9011840107000
0.4220		10.72	12.00	102.00	38.92	55.00	9011840107200
0.4252		10.80	12.00	102.00	38.80	55.00	9011840108000
0.4291	29/64	10.90	12.00	102.00	38.65	55.00	9011840109000
0.4331		11.00	12.00	102.00	38.50	55.00	9011840110000
0.4370		11.10	12.00	102.00	38.35	55.00	9011840111000
0.4374	5/8	11.11	12.00	102.00	38.34	55.00	9011840111100
0.4409		11.20	12.00	102.00	38.20	55.00	9011840112000
0.4449		11.30	12.00	102.00	38.05	55.00	9011840113000
0.4488	15/32	11.40	12.00	102.00	37.90	55.00	9011840114000
0.4528		11.50	12.00	102.00	37.75	55.00	9011840115000
0.4531		11.51	12.00	102.00	37.74	55.00	9011840115100
0.4567	31/64	11.60	12.00	102.00	37.60	55.00	9011840116000
0.4606		11.70	12.00	102.00	37.45	55.00	9011840117000
0.4646		11.80	12.00	102.00	37.30	55.00	9011840118000
0.4685	1 1/2	11.90	12.00	102.00	37.15	55.00	9011840119000
0.4689		11.91	12.00	102.00	37.14	55.00	9011840119100
0.4724		12.00	12.00	102.00	37.00	55.00	9011840120000
0.4764	41/64	12.10	14.00	107.00	41.85	60.00	9011840121000
0.4803		12.20	14.00	107.00	41.70	60.00	9011840122000
0.4843		12.30	14.00	107.00	41.55	60.00	9011840123000
0.4882	45/64	12.40	14.00	107.00	41.40	60.00	9011840124000
0.4921		12.50	14.00	107.00	41.25	60.00	9011840125000
0.4961		12.60	14.00	107.00	41.10	60.00	9011840126000
0.5000	3/4	12.70	14.00	107.00	40.95	60.00	9011840127000
0.5039		12.80	14.00	107.00	40.80	60.00	9011840128000
0.5118		13.00	14.00	107.00	40.50	60.00	9011840130000
0.5157	1 1/4	13.10	14.00	107.00	40.35	60.00	9011840131000
0.5197		13.20	14.00	107.00	40.20	60.00	9011840132000
0.5236		13.30	14.00	107.00	40.05	60.00	9011840133000
0.5315	1 3/4	13.50	14.00	107.00	39.75	60.00	9011840135000
0.5354		13.60	14.00	107.00	39.60	60.00	9011840136000
0.5394		13.70	14.00	107.00	39.45	60.00	9011840137000
0.5433	2 1/4	13.80	14.00	107.00	39.30	60.00	9011840138000
0.5469		13.89	14.00	107.00	39.17	60.00	9011840138900

Diameter (d1)			d2	l1	t _{max}	l2	EDP #
inch	wire/ltr	mm	mm	mm	mm	mm	
0.5472	9/16	13.90	14.00	107.00	39.15	60.00	9011840139000
0.5512		14.00	14.00	107.00	39.00	60.00	9011840140000
0.5591		14.20	16.00	115.00	43.70	65.00	9011840142000
0.5626	1 1/2	14.29	16.00	115.00	43.57	65.00	9011840142900
0.5630		14.30	16.00	115.00	43.55	65.00	9011840143000
0.5669		14.40	16.00	115.00	43.40	65.00	9011840144000
0.5709	1 3/4	14.50	16.00	115.00	43.25	65.00	9011840145000
0.5748		14.60	16.00	115.00	43.10	65.00	9011840146000
0.5787		14.70	16.00	115.00	42.95	65.00	9011840147000
0.5827	2 1/4	14.80	16.00	115.00	42.80	65.00	9011840148000
0.5906		15.00	16.00	115.00	42.50	65.00	9011840150000
0.5945		15.10	16.00	115.00	42.35	65.00	9011840151000
0.5984	2 3/4	15.20	16.00	115.00	42.20	65.00	9011840152000
0.6063		15.40	16.00	115.00	41.90	65.00	9011840154000
0.6094		15.48	16.00	115.00	41.78	65.00	9011840154800
0.6102	3 1/4	15.50	16.00	115.00	41.75	65.00	9011840155000
0.6142		15.60	16.00	115.00	41.60	65.00	9011840156000
0.6181		15.70	16.00	115.00	41.45	65.00	9011840157000
0.6220	3 3/4	15.80	16.00	115.00	41.30	65.00	9011840158000
0.6248		15.87	16.00	115.00	41.20	65.00	9011840158700
0.6260		15.90	16.00	115.00	41.15	65.00	9011840159000
0.6299	4 1/4	16.00	16.00	115.00	41.00	65.00	9011840160000
0.6339		16.10	18.00	123.00	48.85	73.00	9011840161000
0.6378		16.20	18.00	123.00	48.70	73.00	9011840162000
0.6406	4 3/4	16.27	18.00	123.00	48.60	73.00	9011840162700
0.6417		16.30	18.00	123.00	48.55	73.00	9011840163000
0.6496		16.50	18.00	123.00	48.25	73.00	9011840165000
0.6614	5 1/4	16.80	18.00	123.00	47.80	73.00	9011840168000
0.6693		17.00	18.00	123.00	47.50	73.00	9011840170000
0.6811		17.30	18.00	123.00	47.05	73.00	9011840173000
0.6874	5 3/4	17.46	18.00	123.00	46.81	73.00	9011840174600
0.6890		17.50	18.00	123.00	46.75	73.00	9011840175000
0.6969		17.70	18.00	123.00	46.45	73.00	9011840177000
0.7008	6 1/4	17.80	18.00	123.00	46.30	73.00	9011840178000
0.7031		17.86	18.00	123.00	46.21	73.00	9011840178600
0.7087		18.00	18.00	123.00	46.00	73.00	9011840180000
0.7126	6 3/4	18.10	20.00	131.00	51.85	79.00	9011840181000
0.7205		18.30	20.00	131.00	51.55	79.00	9011840183000
0.7283		18.50	20.00	131.00	51.25	79.00	9011840185000
0.7343	7 1/4	18.65	20.00	131.00	51.03	79.00	9011840186500
0.7480		19.00	20.00	131.00	50.50	79.00	9011840190000
0.7500		19.05	20.00	131.00	50.43	79.00	9011840190500
0.7559	7 3/4	19.20	20.00	131.00	50.20	79.00	9011840192000
0.7677		19.50	20.00	131.00	49.75	79.00	9011840195000
0.7717		19.60	20.00	131.00	49.60	79.00	9011840196000
0.7795	8 1/4	19.80	20.00	131.00	49.30	79.00	9011840198000
0.7874		20.00	20.00	131.00	49.00	79.00	9011840200000

Material group	Hardness		SFM	Feed Rate - IPR									
	HRc	Bhn		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	- ≤ 32	≤ 150 ≤ 301	360 295		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	0.0125 0.0100	0.0140 0.0110			
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301	425 360		0.0065 0.0065	0.0100 0.0100	0.0125 0.0125	0.0160 0.0160	0.0160 0.0160	0.0180 0.0180			
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	325 310 295		0.0065 0.0050 0.0050	0.0100 0.0080 0.0080	0.0125 0.0100 0.0100	0.0160 0.0125 0.0125	0.0160 0.0125 0.0125	0.0180 0.0140 0.0140			
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	295 260		0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125	0.0125 0.0125	0.0140 0.0140			
Unalloyed case hardened steels	≤ 25	≤ 255	360		0.0065	0.0100	0.0125	0.0160	0.0160	0.0180			
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402	295 210		0.0050 0.0030	0.0080 0.0050	0.0100 0.0065	0.0125 0.0080	0.0125 0.0080	0.0140 0.0090			
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	260 245		0.0050 0.0030	0.0080 0.0050	0.0100 0.0065	0.0125 0.0080	0.0125 0.0080	0.0140 0.0090			
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	180 130		0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080	0.0100 0.0080	0.0110 0.0090			
High speed steels	≤ 43	≤ 402	145		0.0025	0.0040	0.0050	0.0065	0.0065	0.0070			
Spring steels	≤ 38	≤ 354	145		0.0020	0.0030	0.0040	0.0050	0.0050	0.0055			
Hardened steels	≤ 48 ≤ 66	≤ 460 -											
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	145 130 110		0.0030 0.0030 0.0030	0.0050 0.0050 0.0050	0.0065 0.0065 0.0065	0.0080 0.0080 0.0080	0.0080 0.0080 0.0080	0.0090 0.0090 0.0090			
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	620 360		0.0080 0.0080	0.0125 0.0125	0.0160 0.0160	0.0200 0.0200	0.0200 0.0200	0.0220 0.0220			
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	360 310		0.0080 0.0065	0.0125 0.0100	0.0160 0.0125	0.0200 0.0160	0.0200 0.0160	0.0220 0.0180			
Chilled cast iron	≤ 38	≤ 354											
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549											
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402											
Aluminium and Al-alloys	-	≤ 120	785		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
Al wrought alloys	-	≤ 200	785		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
Al cast alloys ≤ 10 % Si	-	≤ 180	655		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
≤ 24 % Si	-	≤ 180	555		0.0080	0.0125	0.0160	0.0200	0.0200	0.0220			
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150											
Brass, short-chipping	-	≤ 180											
long-chipping	-	≤ 180											
Bronze, short-chipping	-	≤ 180											
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301											
Duroplastics													
Thermoplastics													
Reinforced plastics - Kevlar													
Reinforced plastics - GFK / CFK													

Material group	Hardness		SFM	Feed Rate - IPR									
	HRc	Bhn		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	- ≤ 32	≤ 150 ≤ 301	330 280		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	0.0140 0.0110	0.0160 0.0125			
Free-cutting steels	≤ 25 ≤ 32	≤ 255 ≤ 301	360 280		0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125	0.0180 0.0140	0.0200 0.0160			
Unalloyed heat-treatable steels	≤ 20 ≤ 25 ≤ 32	≤ 220 ≤ 255 ≤ 301	260 280 260		0.0050 0.0050 0.0050	0.0080 0.0080 0.0080	0.0100 0.0100 0.0100	0.0125 0.0125 0.0125	0.0140 0.0140 0.0140	0.0160 0.0160 0.0160			
Alloyed heat-treatable steels	≤ 32 ≤ 43	≤ 301 ≤ 402	260 245		0.0050 0.0040	0.0080 0.0065	0.0100 0.0080	0.0125 0.0100	0.0140 0.0110	0.0160 0.0125			
Unalloyed case hardened steels	≤ 25	≤ 255	330		0.0065	0.0100	0.0125	0.0160	0.0180	0.0200			
Alloyed case hardened steels	≤ 32 ≤ 43	≤ 301 ≤ 402	295 215		0.0050 0.0030	0.0080 0.0050	0.0100 0.0065	0.0125 0.0080	0.0140 0.0090	0.0160 0.0100			
Nitriding steels	≤ 32 ≤ 43	≤ 301 ≤ 402	245 230		0.0040 0.0030	0.0065 0.0050	0.0080 0.0065	0.0100 0.0080	0.0110 0.0090	0.0125 0.0100			
Tool steels	≤ 25 ≤ 43	≤ 255 ≤ 402	165 130		0.0050 0.0030	0.0080 0.0050	0.0100 0.0065	0.0125 0.0080	0.0140 0.0090	0.0160 0.0100			
High speed steels	≤ 43	≤ 402											
Spring steels	≤ 38	≤ 354	115		0.0020	0.0030	0.0040	0.0050	0.0055	0.0065			
Hardened steels	≤ 48 ≤ 66	≤ 460 -											
Stainless steels, sulphured austenitic martensitic	≤ 28 ≤ 36 ≤ 46	≤ 273 ≤ 337 ≤ 435	95 90 90		0.0025 0.0025 0.0020	0.0040 0.0040 0.0030	0.0050 0.0050 0.0040	0.0065 0.0065 0.0050	0.0065 0.0065 0.0050	0.0080 0.0080 0.0065			
Cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	525 395		0.0065 0.0050	0.0100 0.0080	0.0125 0.0100	0.0160 0.0125	0.0180 0.0140	0.0200 0.0160			
Spheroidal graphite iron and malleable cast iron	≤ 23 ≤ 38	≤ 242 ≤ 354	395 310		0.0050 0.0050	0.0080 0.0080	0.0100 0.0100	0.0125 0.0125	0.0140 0.0140	0.0160 0.0160			
Chilled cast iron	≤ 38	≤ 354											
New cast materials GGV	≤ 20 ≤ 32	≤ 220 ≤ 301											
New cast materials ADI	≤ 32 ≤ 43	≤ 301 ≤ 402											
Special alloys	≤ 54	≤ 549											
Ti and Ti-alloys	≤ 25 ≤ 43	≤ 255 ≤ 402											
Aluminium and Al-alloys	-	≤ 120	655		0.0080	0.0125	0.0160	0.0200	0.0220	0.0245			
Al wrought alloys	-	≤ 200	655		0.0080	0.0125	0.0160	0.0200	0.0220	0.0245			
Al cast alloys ≤ 10 % Si	-	≤ 180	560		0.0080	0.0125	0.0160	0.0200	0.0220	0.0245			
≤ 24 % Si	-	≤ 180	460		0.0065	0.0100	0.0125	0.0160	0.0180	0.0200			
Magnesium alloys	-	≤ 120											
Copper, low-alloyed	-	≤ 150											
Brass, short-chipping	-	≤ 180											
long-chipping	-	≤ 180											
Bronze, short-chipping	-	≤ 180											
Bronze, long-chipping	≤ 25 ≤ 32	≤ 255 ≤ 301											
Duroplastics													
Thermoplastics													
Reinforced plastics - Kevlar													
Reinforced plastics - GFK / CFK													