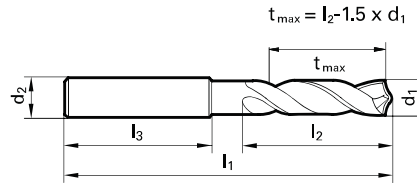


Tool material **Solid Carbide**
Surface **F**

- P** Steel ● web thinning ≥ Ø 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 • steels (alloyed/unalloyed) up to 1200 N/mm² • cast materials • bronze, brass • high-alloyed AISi-alloys
 - N** Aluminum ○
 - S** Titanium alloys ○
 - H** Hardened steel ○
- =Optimal
○=Limited



Speeds and feeds information on pg. 552

Diameter (d1)			d2 mm	l1 mm	t _{max} mm	l2 mm	EDP #
inch	wire/ltr	mm					
0.1181		3.00	6.00	62.00	15.50	20.00	9055140030000
0.1220		3.10	6.00	62.00	15.35	20.00	9055140031000
0.1248	1/8	3.18	6.00	62.00	15.23	20.00	9055140031700
0.1260		3.20	6.00	62.00	15.20	20.00	9055140032000
0.1280		3.25	6.00	62.00	15.13	20.00	9055140032500
0.1299		3.30	6.00	62.00	15.05	20.00	9055140033000
0.1339		3.40	6.00	62.00	14.90	20.00	9055140034000
0.1378		3.50	6.00	62.00	14.75	20.00	9055140035000
0.1406	9/64 #28	3.57	6.00	62.00	14.65	20.00	9055140035700
0.1417		3.60	6.00	62.00	14.60	20.00	9055140036000
0.1457		3.70	6.00	62.00	14.45	20.00	9055140037000
0.1496	#25	3.80	6.00	66.00	18.30	24.00	9055140038000
0.1535		3.90	6.00	66.00	18.15	24.00	9055140039000
0.1563	5/32	3.97	6.00	66.00	18.05	24.00	9055140039700
0.1575		4.00	6.00	66.00	18.00	24.00	9055140040000
0.1591	#21	4.04	6.00	66.00	17.94	24.00	9055140040400
0.1614		4.10	6.00	66.00	17.85	24.00	9055140041000
0.1654		4.20	6.00	66.00	17.70	24.00	9055140042000
0.1693	#18	4.30	6.00	66.00	17.55	24.00	9055140043000
0.1720	11/64	4.37	6.00	66.00	17.45	24.00	9055140043700
0.1732		4.40	6.00	66.00	17.40	24.00	9055140044000
0.1772	#16	4.50	6.00	66.00	17.25	24.00	9055140045000
0.1811		4.60	6.00	66.00	17.10	24.00	9055140046000
0.1831		4.65	6.00	66.00	17.03	24.00	9055140046500
0.1850	#13	4.70	6.00	66.00	16.95	24.00	9055140047000
0.1874	3/16	4.76	6.00	66.00	20.86	28.00	9055140047600
0.1890	#12	4.80	6.00	66.00	20.80	28.00	9055140048000
0.1929		4.90	6.00	66.00	20.65	28.00	9055140049000
0.1969		5.00	6.00	66.00	20.50	28.00	9055140050000
0.2008		5.10	6.00	66.00	20.35	28.00	9055140051000
0.2012	#7	5.11	6.00	66.00	20.34	28.00	9055140051100
0.2031	13/64	5.16	6.00	66.00	20.26	28.00	9055140051600
0.2047		5.20	6.00	66.00	20.20	28.00	9055140052000
0.2067		5.25	6.00	66.00	20.13	28.00	9055140052500
0.2087		5.30	6.00	66.00	20.05	28.00	9055140053000
0.2126		5.40	6.00	66.00	19.90	28.00	9055140054000
0.2130	#3	5.41	6.00	66.00	19.89	28.00	9055140054100
0.2165		5.50	6.00	66.00	19.75	28.00	9055140055000
0.2185		5.55	6.00	66.00	19.68	28.00	9055140055500
0.2189	7/32	5.56	6.00	66.00	19.66	28.00	9055140055600
0.2205		5.60	6.00	66.00	19.60	28.00	9055140056000
0.2244		5.70	6.00	66.00	19.45	28.00	9055140057000

Diameter (d1)			d2 mm	l1 mm	t _{max} mm	l2 mm	EDP #
inch	wire/ltr	mm					
0.2283		5.80	6.00	66.00	19.30	28.00	9055140058000
0.2323		5.90	6.00	66.00	19.15	28.00	9055140059000
0.2343	15/64	5.95	6.00	66.00	19.08	28.00	9055140059500
0.2362		6.00	6.00	66.00	19.00	28.00	9055140060000
0.2402		6.10	8.00	79.00	24.85	34.00	9055140061000
0.2441		6.20	8.00	79.00	24.70	34.00	9055140062000
0.2480		6.30	8.00	79.00	24.55	34.00	9055140063000
0.2500	1/4 E	6.35	8.00	79.00	24.48	34.00	9055140063500
0.2520		6.40	8.00	79.00	24.40	34.00	9055140064000
0.2559		6.50	8.00	79.00	24.25	34.00	9055140065000
0.2571	F	6.53	8.00	79.00	24.21	34.00	9055140065300
0.2598		6.60	8.00	79.00	24.10	34.00	9055140066000
0.2638		6.70	8.00	79.00	23.95	34.00	9055140067000
0.2657	17/64 H	6.75	8.00	79.00	23.88	34.00	9055140067500
0.2677		6.80	8.00	79.00	23.80	34.00	9055140068000
0.2717	I	6.90	8.00	79.00	23.65	34.00	9055140069000
0.2756		7.00	8.00	79.00	23.50	34.00	9055140070000
0.2795		7.10	8.00	79.00	30.35	41.00	9055140071000
0.2811	9/32 K	7.14	8.00	79.00	30.29	41.00	9055140071400
0.2835		7.20	8.00	79.00	30.20	41.00	9055140072000
0.2874		7.30	8.00	79.00	30.05	41.00	9055140073000
0.2913		7.40	8.00	79.00	29.90	41.00	9055140074000
0.2953		7.50	8.00	79.00	29.75	41.00	9055140075000
0.2969	19/64	7.54	8.00	79.00	29.69	41.00	9055140075400
0.2992		7.60	8.00	79.00	29.60	41.00	9055140076000
0.3031		7.70	8.00	79.00	29.45	41.00	9055140077000
0.3071		7.80	8.00	79.00	29.30	41.00	9055140078000
0.3110		7.90	8.00	79.00	29.15	41.00	9055140079000
0.3125	5/16	7.94	8.00	79.00	29.09	41.00	9055140079400
0.3150		8.00	8.00	79.00	29.00	41.00	9055140080000
0.3189		8.10	10.00	89.00	34.85	47.00	9055140081000
0.3228	P	8.20	10.00	89.00	34.70	47.00	9055140082000
0.3268		8.30	10.00	89.00	34.55	47.00	9055140083000
0.3280	21/64	8.33	10.00	89.00	34.51	47.00	9055140083300
0.3307		8.40	10.00	89.00	34.40	47.00	9055140084000
0.3346		8.50	10.00	89.00	34.25	47.00	9055140085000
0.3386		8.60	10.00	89.00	34.10	47.00	9055140086000
0.3425		8.70	10.00	89.00	33.95	47.00	9055140087000
0.3437	11/32	8.73	10.00	89.00	33.91	47.00	9055140087300
0.3465		8.80	10.00	89.00	33.80	47.00	9055140088000
0.3504		8.90	10.00	89.00	33.65	47.00	9055140089000
0.3543		9.00	10.00	89.00	33.50	47.00	9055140090000

Diameter (d1)			d2 mm	l1 mm	t _{max} mm	l2 mm	EDP #
inch	wire/ltr	mm					
0.3583		9.10	10.00	89.00	33.35	47.00	9055140091000
0.3594	23/64	9.13	10.00	89.00	33.31	47.00	9055140091300
0.3622		9.20	10.00	89.00	33.20	47.00	9055140092000
0.3642		9.25	10.00	89.00	33.13	47.00	9055140092500
0.3661		9.30	10.00	89.00	33.05	47.00	9055140093000
0.3677	U	9.34	10.00	89.00	32.99	47.00	9055140093400
0.3701		9.40	10.00	89.00	32.90	47.00	9055140094000
0.3740		9.50	10.00	89.00	32.75	47.00	9055140095000
0.3750	3/8	9.52	10.00	89.00	32.72	47.00	9055140095200
0.3780		9.60	10.00	89.00	32.60	47.00	9055140096000
0.3819		9.70	10.00	89.00	32.45	47.00	9055140097000
0.3858	W	9.80	10.00	89.00	32.30	47.00	9055140098000
0.3898		9.90	10.00	89.00	32.15	47.00	9055140099000
0.3906	25/64	9.92	10.00	89.00	32.12	47.00	9055140099200
0.3937		10.00	10.00	89.00	32.00	47.00	9055140100000
0.3976		10.10	12.00	102.00	39.85	55.00	9055140101000
0.4016		10.20	12.00	102.00	39.70	55.00	9055140102000
0.4055		10.30	12.00	102.00	39.55	55.00	9055140103000
0.4063	13/32	10.32	12.00	102.00	39.52	55.00	9055140103200
0.4094		10.40	12.00	102.00	39.40	55.00	9055140104000
0.4134		10.50	12.00	102.00	39.25	55.00	9055140105000
0.4173		10.60	12.00	102.00	39.10	55.00	9055140106000
0.4213		10.70	12.00	102.00	38.95	55.00	9055140107000
0.4220	27/64	10.72	12.00	102.00	38.92	55.00	9055140107200
0.4252		10.80	12.00	102.00	38.80	55.00	9055140108000
0.4291		10.90	12.00	102.00	38.65	55.00	9055140109000
0.4331		11.00	12.00	102.00	38.50	55.00	9055140110000
0.4370		11.10	12.00	102.00	38.35	55.00	9055140111000
0.4374	7/16	11.11	12.00	102.00	38.34	55.00	9055140111100
0.4409		11.20	12.00	102.00	38.20	55.00	9055140112000
0.4449		11.30	12.00	102.00	38.05	55.00	9055140113000
0.4488		11.40	12.00	102.00	37.90	55.00	9055140114000
0.4528		11.50	12.00	102.00	37.75	55.00	9055140115000
0.4531	29/64	11.51	12.00	102.00	37.74	55.00	9055140115100
0.4567		11.60	12.00	102.00	37.60	55.00	9055140116000
0.4606		11.70	12.00	102.00	37.45	55.00	9055140117000
0.4646		11.80	12.00	102.00	37.30	55.00	9055140118000
0.4685		11.90	12.00	102.00	37.15	55.00	9055140119000
0.4689	15/32	11.91	12.00	102.00	37.14	55.00	9055140119100
0.4724		12.00	12.00	102.00	37.00	55.00	9055140120000
0.4764		12.10	14.00	107.00	41.85	60.00	9055140121000
0.4803		12.20	14.00	107.00	41.70	60.00	9055140122000
0.4843	31/64	12.30	14.00	107.00	41.55	60.00	9055140123000
0.4882		12.40	14.00	107.00	41.40	60.00	9055140124000
0.4921		12.50	14.00	107.00	41.25	60.00	9055140125000
0.4961		12.60	14.00	107.00	41.10	60.00	9055140126000
0.5000	1/2	12.70	14.00	107.00	40.95	60.00	9055140127000
0.5039		12.80	14.00	107.00	40.80	60.00	9055140128000
0.5079		12.90	14.00	107.00	40.65	60.00	9055140129000
0.5118		13.00	14.00	107.00	40.50	60.00	9055140130000
0.5157	33/64	13.10	14.00	107.00	40.35	60.00	9055140131000
0.5197		13.20	14.00	107.00	40.20	60.00	9055140132000
0.5236		13.30	14.00	107.00	40.05	60.00	9055140133000

Diameter (d1)			d2 mm	l1 mm	t _{max} mm	l2 mm	EDP #
inch	wire/ltr	mm					
0.5276		13.40	14.00	107.00	39.90	60.00	9055140134000
0.5311	17/32	13.49	14.00	107.00	39.77	60.00	9055140134900
0.5315		13.50	14.00	107.00	39.75	60.00	9055140135000
0.5354		13.60	14.00	107.00	39.60	60.00	9055140136000
0.5394		13.70	14.00	107.00	39.45	60.00	9055140137000
0.5433		13.80	14.00	107.00	39.30	60.00	9055140138000
0.5469	35/64	13.89	14.00	107.00	39.17	60.00	9055140138900
0.5472		13.90	14.00	107.00	39.15	60.00	9055140139000
0.5512		14.00	14.00	107.00	39.00	60.00	9055140140000
0.5551		14.10	16.00	115.00	43.85	65.00	9055140141000
0.5591		14.20	16.00	115.00	43.70	65.00	9055140142000
0.5626	9/16	14.29	16.00	115.00	43.57	65.00	9055140142900
0.5630		14.30	16.00	115.00	43.55	65.00	9055140143000
0.5669		14.40	16.00	115.00	43.40	65.00	9055140144000
0.5709		14.50	16.00	115.00	43.25	65.00	9055140145000
0.5748		14.60	16.00	115.00	43.10	65.00	9055140146000
0.5780	37/64	14.68	16.00	115.00	42.98	65.00	9055140146800
0.5787		14.70	16.00	115.00	42.95	65.00	9055140147000
0.5827		14.80	16.00	115.00	42.80	65.00	9055140148000
0.5866		14.90	16.00	115.00	42.65	65.00	9055140149000
0.5906		15.00	16.00	115.00	42.50	65.00	9055140150000
0.5937	19/32	15.08	16.00	115.00	42.38	65.00	9055140150800
0.5945		15.10	16.00	115.00	42.35	65.00	9055140151000
0.5984		15.20	16.00	115.00	42.20	65.00	9055140152000
0.6024		15.30	16.00	115.00	42.05	65.00	9055140153000
0.6063		15.40	16.00	115.00	41.90	65.00	9055140154000
0.6094	39/64	15.48	16.00	115.00	41.78	65.00	9055140154800
0.6102		15.50	16.00	115.00	41.75	65.00	9055140155000
0.6142		15.60	16.00	115.00	41.60	65.00	9055140156000
0.6181		15.70	16.00	115.00	41.45	65.00	9055140157000
0.6220		15.80	16.00	115.00	41.30	65.00	9055140158000
0.6250	5/8	15.87	16.00	115.00	41.20	65.00	9055140158700
0.6260		15.90	16.00	115.00	41.15	65.00	9055140159000
0.6299		16.00	16.00	115.00	41.00	65.00	9055140160000
0.6406	41/64	16.27	18.00	123.00	48.60	73.00	9055140162700
0.6496		16.50	18.00	123.00	48.25	73.00	9055140165000
0.6563	21/32	16.67	18.00	123.00	48.00	73.00	9055140166700
0.6693		17.00	18.00	123.00	47.50	73.00	9055140170000
0.6720	43/64	17.07	18.00	123.00	47.40	73.00	9055140170700
0.6874	11/16	17.46	18.00	123.00	46.81	73.00	9055140174600
0.6890		17.50	18.00	123.00	46.75	73.00	9055140175000
0.7031	45/64	17.86	18.00	123.00	46.21	73.00	9055140178600
0.7087		18.00	18.00	123.00	46.00	73.00	9055140180000
0.7189	23/32	18.26	20.00	131.00	51.61	79.00	9055140182600
0.7283		18.50	20.00	131.00	51.25	79.00	9055140185000
0.7480		19.00	20.00	131.00	50.50	79.00	9055140190000
0.7500	3/4	19.05	20.00	131.00	50.43	79.00	9055140190500
0.7579		19.25	20.00	131.00	50.13	79.00	9055140192500
0.7657	49/64	19.45	20.00	131.00	49.83	79.00	9055140194460
0.7677		19.50	20.00	131.00	49.75	79.00	9055140195000
0.7811	25/32	19.84	20.00	131.00	49.24	79.00	9055140198400
0.7874		20.00	20.00	131.00	49.00	79.00	9055140200000

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	-	150	425		0.0065	0.0100	0.0125	0.0160	0.0160				
	32	301	360		0.0050	0.0080	0.0100	0.0125	0.0125				
Free-cutting steels	25	255	475		0.0080	0.0125	0.0160	0.0200	0.0200				
	32	301	360		0.0065	0.0100	0.0125	0.0160	0.0160				
Unalloyed heat-treatable steels	20	220	395		0.0065	0.0100	0.0125	0.0160	0.0160				
	25	255	360		0.0065	0.0100	0.0125	0.0160	0.0160				
	32	301	345		0.0065	0.0100	0.0125	0.0160	0.0160				
Alloyed heat-treatable steels	32	301	345		0.0065	0.0100	0.0125	0.0160	0.0160				
	43	402	330		0.0050	0.0080	0.0100	0.0125	0.0125				
Unalloyed case hardened steels	25	255	425		0.0080	0.0125	0.0160	0.0200	0.0200				
Alloyed case hardened steels	32	301	395		0.0065	0.0100	0.0125	0.0160	0.0160				
	43	402	280		0.0040	0.0065	0.0080	0.0100	0.0100				
Nitriding steels	32	301	330		0.0050	0.0080	0.0100	0.0125	0.0125				
	43	402	295		0.0040	0.0065	0.0080	0.0100	0.0100				
Tool steels	25	255	215		0.0050	0.0080	0.0100	0.0125	0.0125				
	43	402	180		0.0040	0.0065	0.0080	0.0100	0.0100				
High speed steels	43	402	150		0.0030	0.0050	0.0065	0.0080	0.0080				
Spring steels	38	354	150		0.0025	0.0040	0.0050	0.0065	0.0065				
Hardened steels	48	460	150		0.0025	0.0040	0.0050	0.0065	0.0065				
	66	-	80		0.0020	0.0030	0.0040	0.0050	0.0050				
Stainless steels, sulphured	28	273	180		0.0030	0.0050	0.0065	0.0080	0.0080				
austenitic	36	337	150		0.0030	0.0050	0.0065	0.0080	0.0080				
martensitic	46	435	150		0.0025	0.0040	0.0050	0.0065	0.0065				
Cast iron	23	242	690		0.0080	0.0125	0.0160	0.0200	0.0200				
	38	354	510		0.0080	0.0125	0.0160	0.0200	0.0200				
Spheroidal graphite iron and malleable cast iron	23	242	510		0.0065	0.0100	0.0125	0.0160	0.0160				
	38	354	410		0.0065	0.0100	0.0125	0.0160	0.0160				
Chilled cast iron	38	354	115		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	80		0.0030	0.0050	0.0065	0.0080	0.0080				
Ti and Ti-alloys	25	255	130		0.0030	0.0050	0.0065	0.0080	0.0080				
	43	402	115		0.0025	0.0040	0.0050	0.0065	0.0065				
Aluminium and Al-alloys	-	120	855		0.0100	0.0160	0.0200	0.0245	0.0245				
Al wrought alloys	-	200	855		0.0100	0.0160	0.0200	0.0245	0.0245				
Al cast alloys ≤ 10 % Si	-	180	720		0.0080	0.0125	0.0160	0.0200	0.0200				
≤ 24 % Si	-	180	590		0.0080	0.0125	0.0160	0.0200	0.0200				
Magnesium alloys	-	120	855		0.0080	0.0125	0.0160	0.0200	0.0200				
Copper, low-alloyed	-	150	360		0.0065	0.0065	0.0100	0.0125	0.0125				
Brass, short-chipping	-	180	885		0.0080	0.0125	0.0160	0.0200	0.0200				
long-chipping	-	180	590		0.0065	0.0100	0.0125	0.0160	0.0160				
Bronze, short-chipping	-	180	360		0.0065	0.0065	0.0100	0.0125	0.0125				
	25	255	330		0.0050	0.0050	0.0080	0.0100	0.0100				
Bronze, long-chipping	25	255	240		0.0050	0.0050	0.0080	0.0100	0.0100				
	32	301	215		0.0050	0.0050	0.0080	0.0100	0.0100				
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	-	150	425		0.0065	0.0100	0.0125	0.0160	0.0160				
	32	301	360		0.0050	0.0080	0.0100	0.0125	0.0125				
Free-cutting steels	25	255	475		0.0080	0.0125	0.0160	0.0200	0.0200				
	32	301	360		0.0065	0.0100	0.0125	0.0160	0.0160				
Unalloyed heat-treatable steels	20	220	395		0.0065	0.0100	0.0125	0.0160	0.0160				
	25	255	360		0.0065	0.0100	0.0125	0.0160	0.0160				
	32	301	345		0.0065	0.0100	0.0125	0.0160	0.0160				
Alloyed heat-treatable steels	32	301	345		0.0065	0.0100	0.0125	0.0160	0.0160				
	43	402	330		0.0050	0.0080	0.0100	0.0125	0.0125				
Unalloyed case hardened steels	25	255	425		0.0080	0.0125	0.0160	0.0200	0.0200				
Alloyed case hardened steels	32	301	395		0.0065	0.0100	0.0125	0.0160	0.0160				
	43	402	280		0.0040	0.0065	0.0080	0.0100	0.0100				
Nitriding steels	32	301	320		0.0050	0.0080	0.0100	0.0125	0.0125				
	43	402	280		0.0040	0.0065	0.0080	0.0100	0.0100				
Tool steels	25	255	195		0.0050	0.0080	0.0100	0.0125	0.0125				
	43	402	145		0.0040	0.0065	0.0080	0.0100	0.0100				
High speed steels	43	402	150		0.0030	0.0050	0.0065	0.0080	0.0080				
Spring steels	38	354	150		0.0025	0.0040	0.0050	0.0065	0.0065				
Hardened steels	48	460	150		0.0025	0.0040	0.0050	0.0065	0.0065				
	66	-	80		0.0020	0.0030	0.0040	0.0050	0.0050				
Stainless steels, sulphured	28	273	180		0.0030	0.0050	0.0065	0.0080	0.0080				
austenitic	36	337	150		0.0030	0.0050	0.0065	0.0080	0.0080				
martensitic	46	435	150		0.0025	0.0040	0.0050	0.0065	0.0065				
Cast iron	23	242	690		0.0080	0.0125	0.0160	0.0200	0.0200				
	38	354	510		0.0080	0.0125	0.0160	0.0200	0.0200				
Spheroidal graphite iron and malleable cast iron	23	242	475		0.0065	0.0100	0.0125	0.0160	0.0160				
	38	354	410		0.0065	0.0100	0.0125	0.0160	0.0160				
Chilled cast iron	38	354	115		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	80		0.0030	0.0050	0.0065	0.0080	0.0080				
Ti and Ti-alloys	25	255	130		0.0030	0.0050	0.0065	0.0080	0.0080				
	43	402	115		0.0025	0.0040	0.0050	0.0065	0.0065				
Aluminium and Al-alloys	-	120	855		0.0080	0.0125	0.0160	0.0200	0.0200				
Al wrought alloys	-	200	855		0.0080	0.0125	0.0160	0.0200	0.0200				
Al cast alloys ≤ 10 % Si	-	180	700		0.0080	0.0125	0.0160	0.0200	0.0200				
≤ 24 % Si	-	180	560		0.0080	0.0125	0.0160	0.0200	0.0200				
Magnesium alloys	-	120	855		0.0080	0.0125	0.0160	0.0200	0.0200				
Copper, low-alloyed	-	150	360		0.0065	0.0100	0.0100	0.0125	0.0160				
Brass, short-chipping	-	180	885		0.0080	0.0125	0.0160	0.0200	0.0200				
long-chipping	-	180	590		0.0065	0.0100	0.0125	0.0160	0.0160				
Bronze, short-chipping	-	180	360		0.0065	0.0100	0.0100	0.0125	0.0160				
	25	255	330		0.0050	0.0080	0.0080	0.0100	0.0125				
Bronze, long-chipping	25	255	240		0.0050	0.0080	0.0080	0.0100	0.0125				
	32	301	215		0.0050	0.0080	0.0080	0.0100	0.0125				
Duroplastics													
Thermoplastics													
Reinforced plastics - Kevlar													
Reinforced plastics - GFK / CFK													