



PA-MONOFILAMENTS
Polyamide Copolymer Monofilament
TECHNICAL PARAMETERS

Balázs Filament Technologies Ltd.

2006

ISO 9001



Certified company

Diameter - Specific length - Denier - Decitex

Size	Specific length	Denier	Decitex
Ø0,10mm	106 000 m/kg	80,5	89,4
Ø0,12mm	73 500 m/kg	115,9	128,8
Ø0,14mm	54 100 m/kg	157,7	175,3
Ø0,15mm	47 100 m/kg	181,1	201,2
Ø0,16mm	41 400 m/kg	206,0	228,9
Ø0,17 mm	36 700 m/kg	232,6	258,4
Ø0,18mm	32 700 m/kg	260,8	289,7
Ø0,19mm	29 300 m/kg	290,5	322,8
Ø0,20mm	26 500 m/kg	321,9	357,7
Ø0,21mm	24 000 m/kg	354,9	394,4
Ø0,22mm	21 900 m/kg	389,5	432,8
Ø0,25mm	16 900 m/kg	503,0	558,9
Ø0,26mm	15 600 m/kg	544,1	604,5
Ø0,27mm	14 500 m/kg	586,7	651,9
Ø0,28mm	13 500 m/kg	631,0	701,1
Ø0,30mm	11 700 m/kg	724,3	804,8
Ø0,32mm	10 300 m/kg	824,1	915,7
Ø0,33mm	9 700 m/kg	876,5	973,8
Ø0,35mm	8 600 m/kg	985,9	1 095,5
Ø0,40mm	6 600 m/kg	1 287,7	1 430,8
Ø0,45mm	5 200 m/kg	1 629,8	1 810,9
Ø0,50mm	4 200 m/kg	2 012,1	2 235,6
Ø0,60mm	2 900 m/kg	2 897,4	3 219,3
Ø0,70mm	2 100 m/kg	3 943,7	4 381,8

Denier and Decitex

- Denier and Decitex is a measure of line thickness expressed in gram.
- 1 Denier is a line that weight 1 gram per 9 000 meters.
- 1 Decitex is a line that weight 1 gram per 10 000 meters.

Parameters and tests

Linear strength and Knot strength

Tests were performed according to ISO Standard 2062:1993 which is accepted by EFTTA (European Fishing Tackle Trade Association). At the tests CRT (Constant Rate of Travel) WOLPERT testing machine was used. The sample with a grip to grip length of 500 mm was pulled at a constant speed of 500 mm/minute up to its brake. The load recorded at the moment it breaks is the tensile strength.

In the case of the knot strength test the sample was pulled with a simple knot tied previously at the middle of the length.

Linear tensile strength, Knotted tensile strength (kg, LB)

The linear tensile strength and knotted tensile strength recorded at the moment of breakage are expressed in kg and LB.

Relative linear tensile strength, Relative knotted tensile strength (kg/mm²)

The linear tensile strength and knotted tensile strength recorded at the moment of breakage referred to the cross section of the line.

Linear tenacity (gr/Denier)

Linear tenacity is the ratio of line's linear tensile strength to its Denier. This represent the linear strength of line's material.

Linear tenacity = Linear tensile strength / Denier

Knotted tenacity (gr/Denier)

Knotted tenacity is the ratio of line's knotted tensile strength to its Denier. This represent the knotted strength of line's material.

Knotted tenacity = Knotted tensile strength / Denier

Data

The tables contain the data of most frequently used lines (main sizes).

Type CoPA 31

Size	Linear strength				Knot strength			
	Linear tensile strength (kg)	Linear tensile strength (LB)	Relative linear tensile strength (kg/mm ²)	Linear tenacity (gr/Denier)	Knotted tensile strength (kg)	Knotted tensile strength (LB)	Relative knotted tensile strength (kg/mm ²)	Knotted tenacity (gr/Denier)
Ø0,10mm	1,05	2,31	133,69	13,04	0,90	1,98	114,59	11,18
Ø0,12mm	1,35	2,98	119,37	11,65	1,15	2,54	101,68	9,92
Ø0,14mm	1,75	3,86	113,68	11,10	1,45	3,20	94,19	9,19
Ø0,16mm	2,10	4,63	104,45	10,19	1,85	4,08	92,01	8,98
Ø0,18mm	2,65	5,84	104,14	10,16	2,25	4,96	88,42	8,63
Ø0,20mm	3,20	7,05	101,86	9,94	2,70	5,95	85,94	8,39
Ø0,22mm	3,80	8,38	99,97	9,76	3,20	7,05	84,18	8,22
Ø0,25mm	4,85	10,69	98,80	9,64	4,05	8,93	82,51	8,05
Ø0,28mm	6,00	13,23	97,44	9,51	5,05	11,13	82,01	8,00
Ø0,30mm	6,80	14,99	96,20	9,39	5,70	12,57	80,64	7,87
Ø0,32mm	7,50	16,53	93,25	9,10	6,40	14,11	79,58	7,77
Ø0,35mm	8,80	19,40	91,47	8,93	7,50	16,53	77,95	7,61
Ø0,40mm	11,40	25,13	90,72	8,85	9,50	20,94	75,60	7,38
Ø0,45mm	14,10	31,09	88,66	8,65	11,60	25,57	72,94	7,12
Ø0,50mm	17,25	38,03	87,85	8,57	14,10	31,09	71,81	7,01

Type CoPA 32

Size	Linear strength				Knot strength			
	Linear tensile strength (kg)	Linear tensile strength (LB)	Relative linear tensile strength (kg/mm ²)	Linear tenacity (gr/Denier)	Knotted tensile strength (kg)	Knotted tensile strength (LB)	Relative knotted tensile strength (kg/mm ²)	Knotted tenacity (gr/Denier)
Ø0,10mm	1,00	2,20	127,32	12,42	0,90	1,98	114,59	11,18
Ø0,12mm	1,30	2,87	114,95	11,22	1,15	2,54	101,68	9,92
Ø0,14mm	1,70	3,75	110,43	10,78	1,50	3,31	97,44	9,51
Ø0,16mm	2,05	4,52	101,96	9,95	1,90	4,19	94,50	9,22
Ø0,18mm	2,55	5,62	100,21	9,78	2,30	5,07	90,38	8,82
Ø0,20mm	3,10	6,83	98,68	9,63	2,75	6,06	87,54	8,54
Ø0,22mm	3,70	8,16	97,33	9,50	3,25	7,17	85,50	8,34
Ø0,25mm	4,70	10,36	95,75	9,34	4,15	9,15	84,54	8,25
Ø0,28mm	5,80	12,79	94,19	9,19	5,15	11,35	83,64	8,16
Ø0,30mm	6,60	14,55	93,37	9,11	5,80	12,79	82,05	8,01
Ø0,32mm	7,30	16,09	90,77	8,86	6,50	14,33	80,82	7,89
Ø0,35mm	8,55	18,85	88,87	8,67	7,60	16,76	78,99	7,71
Ø0,40mm	11,10	24,47	88,33	8,62	9,65	21,27	76,79	7,49
Ø0,45mm	13,80	30,42	86,77	8,47	11,75	25,90	73,88	7,21
Ø0,50mm	16,90	37,26	86,07	8,40	14,30	31,53	72,83	7,11

Type CoPA 61

Size	Linear strength				Knot strength			
	Linear tensile strength (kg)	Linear tensile strength (LB)	Relative linear tensile strength (kg/mm ²)	Linear tenacity (gr/Denier)	Knotted tensile strength (kg)	Knotted tensile strength (LB)	Relative knotted tensile strength (kg/mm ²)	Knotted tenacity (gr/Denier)
Ø0,10mm	1,05	2,31	133,69	13,04	0,95	2,09	120,96	11,80
Ø0,12mm	1,40	3,09	123,79	12,08	1,30	2,87	114,95	11,22
Ø0,14mm	1,90	4,19	123,43	12,05	1,70	3,75	110,43	10,78
Ø0,16mm	2,20	4,85	109,42	10,68	2,10	4,63	104,45	10,19
Ø0,18mm	2,75	6,06	108,07	10,54	2,45	5,40	96,28	9,39
Ø0,20mm	3,35	7,39	106,63	10,41	2,95	6,50	93,90	9,16
Ø0,22mm	3,95	8,71	103,91	10,14	3,45	7,61	90,76	8,86
Ø0,25mm	5,00	11,02	101,86	9,94	4,40	9,70	89,64	8,75
Ø0,28mm	6,15	13,56	99,88	9,75	5,40	11,91	87,70	8,56
Ø0,30mm	7,00	15,43	99,03	9,66	6,10	13,45	86,30	8,42
Ø0,32mm	7,70	16,98	95,74	9,34	6,80	14,99	84,55	8,25
Ø0,35mm	9,05	19,95	94,06	9,18	7,95	17,53	82,63	8,06
Ø0,40mm	11,45	25,24	91,12	8,89	10,10	22,27	80,37	7,84
Ø0,45mm	14,35	31,64	90,23	8,80	12,15	26,79	76,39	7,45
Ø0,50mm	17,40	38,36	88,62	8,65	14,75	32,52	75,12	7,33

Type CoPA 91

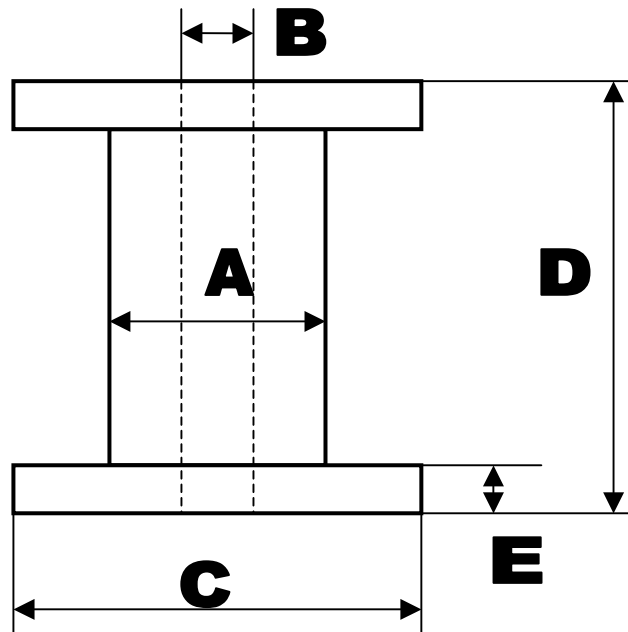
Size	Linear strength				Knot strength			
	Linear tensile strength (kg)	Linear tensile strength (LB)	Relative linear tensile strength (kg/mm ²)	Linear tenacity (gr/Denier)	Knotted tensile strength (kg)	Knotted tensile strength (LB)	Relative knotted tensile strength (kg/mm ²)	Knotted tenacity (gr/Denier)
Ø0,10mm	1,10	2,43	140,06	13,66	1,00	2,20	127,32	12,42
Ø0,12mm	1,50	3,31	132,63	12,94	1,40	3,09	123,79	12,08
Ø0,14mm	2,00	4,41	129,92	12,68	1,85	4,08	120,18	11,73
Ø0,16mm	2,35	5,18	116,88	11,41	2,15	4,74	106,93	10,44
Ø0,18mm	2,90	6,39	113,96	11,12	2,60	5,73	102,17	9,97
Ø0,20mm	3,50	7,72	111,41	10,87	3,05	6,72	97,08	9,47
Ø0,22mm	4,10	9,04	107,86	10,53	3,60	7,94	94,70	9,24
Ø0,25mm	5,20	11,46	105,93	10,34	4,60	10,14	93,71	9,15
Ø0,28mm	6,35	14,00	103,13	10,06	5,60	12,35	90,95	8,87
Ø0,30mm	7,20	15,87	101,86	9,94	6,30	13,89	89,13	8,70
Ø0,32mm	7,90	17,42	98,23	9,59	7,00	15,43	87,04	8,49
Ø0,35mm	9,30	20,50	96,66	9,43	8,20	18,08	85,23	8,32
Ø0,40mm	11,70	25,79	93,11	9,09	10,40	22,93	82,76	8,08
Ø0,45mm	14,60	32,19	91,80	8,96	12,40	27,34	77,97	7,61
Ø0,50mm	17,70	39,02	90,15	8,80	15,00	33,07	76,39	7,45

Type CoPA 91 M

Size	Linear strength				Knot strength			
	Linear tensile strength (kg)	Linear tensile strength (LB)	Relative linear tensile strength (kg/mm ²)	Linear tenacity (gr/Denier)	Knotted tensile strength (kg)	Knotted tensile strength (LB)	Relative knotted tensile strength (kg/mm ²)	Knotted tenacity (gr/Denier)
Ø0,10mm	1,10	2,43	140,06	13,66	1,05	2,31	133,69	13,04
Ø0,12mm	1,50	3,31	132,63	12,94	1,45	3,20	128,21	12,51
Ø0,14mm	2,00	4,41	129,92	12,68	1,90	4,19	123,43	12,05
Ø0,16mm	2,35	5,18	116,88	11,41	2,20	4,85	109,42	10,68
Ø0,18mm	2,90	6,39	113,96	11,12	2,70	5,95	106,10	10,35
Ø0,20mm	3,50	7,72	111,41	10,87	3,15	6,94	100,27	9,79
Ø0,22mm	4,10	9,04	107,86	10,53	3,70	8,16	97,33	9,50
Ø0,25mm	5,20	11,46	105,93	10,34	4,75	10,47	96,77	9,44
Ø0,28mm	6,35	14,00	103,13	10,06	5,75	12,68	93,38	9,11
Ø0,30mm	7,20	15,87	101,86	9,94	6,50	14,33	91,96	8,97
Ø0,32mm	7,90	17,42	98,23	9,59	7,20	15,87	89,52	8,74
Ø0,35mm	9,30	20,50	96,66	9,43	8,45	18,63	87,83	8,57
Ø0,40mm	11,70	25,79	93,11	9,09	10,70	23,59	85,15	8,31
Ø0,45mm	14,60	32,19	91,80	8,96	12,75	28,11	80,17	7,82
Ø0,50mm	17,70	39,02	90,15	8,80	15,40	33,95	78,43	7,65

Dimensions of the bulk spools

The PA-MONOFILAMENTS product are delivered on plastic spools having dimensions as indicated below. The size of the spool selected from the three types depends on the diameter of the line and quantity ordered by the customer.



A: Diameter of the spool
B: Diameter of the hole

C: Diameter of the flange
D: Height of the spool

E: Height of the flange

Dimension	DIN 160 spool capacity maximum 1kg*	DIN 200 spool capacity maximum 2kg*	DIN 250 spool capacity maximum 3kg*
	(mm)	(mm)	(mm)
A	100	122	158
B	23	23	23
C	160	200	250
D	160	200	200
E	15	20	20

The maximum capacities of the plastic spools are 1 kg, 2 kg and 3 kg. The quantity of the line wound on the spool depends on the diameter and quantity ordered by the customer. In order to avoid unexpected damage of the spool it may happen that in case of small diameters you will find just 0,3 – 0,4 kg PA-MONOFILAMENTS product on the bulk spool (e.g. at diameter 0,12 mm there is just 0,3 – 0,4 kg product on a DIN 200 bulk spool).