



MOORING



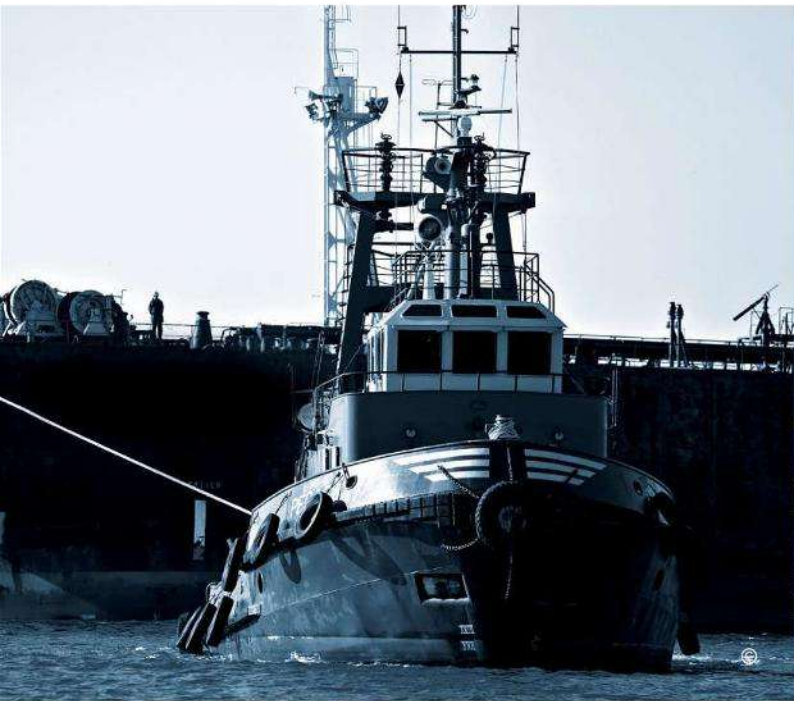
OXYGEN

EX PIPE  
LIFT PUMP

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Cotesi.  
A company moored  
to leadership,  
experience  
and innovation.  
And to your  
success.





**Cotesi** is one of the worldwide leading companies in the production and distribution of ropes and nets for the marine and fishing industries.

With a vast experience of over 50 years, **Cotesi** keeps its focus in the future, being in the front line of innovation and development of pioneer products, and continuously providing new solutions for the increasing demands of its costumers.

Its global presence has been allowing it to build a net of solid relationships with its costumers around the world.

The deep knowledge of the industry's needs and a strong notion of service turn **Cotesi** into a partner rather than a supplier.

The complete range of mooring ropes provided by **Cotesi** gives you a full warranty of the highest standards of quality, durability and resistance required for your company's success.





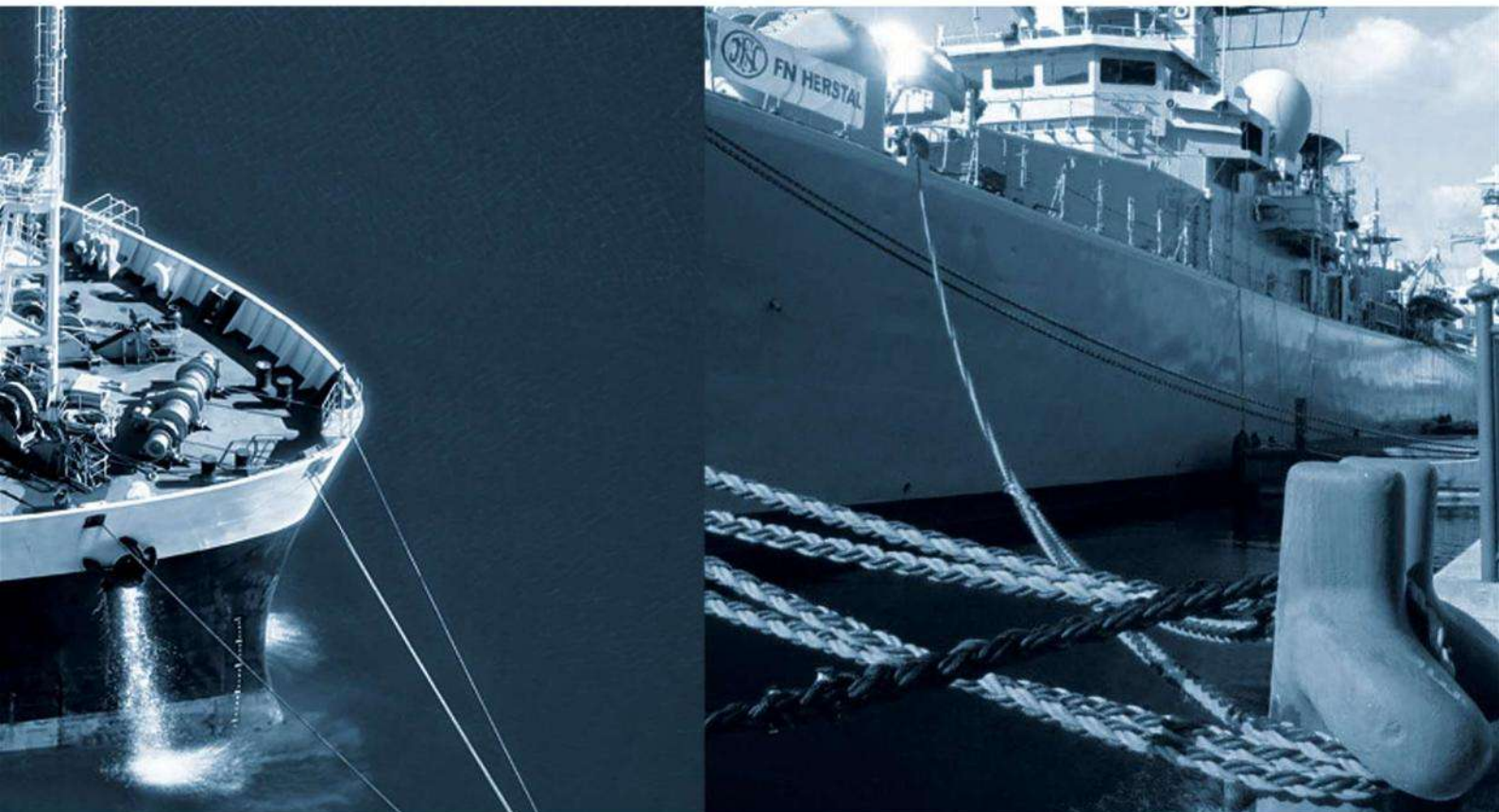
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Made from HMWPE fibres and protected by a self unique impregnation that improves its abrasion resistance, Cotesi D-tech ropes must be considered when high breaking strengths are required. Using a torque free 12 strands braided construction, D-tech is stronger than steel wire of the same weight and has proven to be a cost-saving replacement for wire rope in several applications.



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
8	5/16	1	3,8	2,6	6.400	14.119	62,7
10	3/8	1-1/8	6,1	4,1	10.200	22.487	100,0
12	1/2	1-1/2	9,3	6,2	15.600	34.392	152,9
14	9/16	1-3/4	12,5	8,4	20.700	45.635	202,9
16	5/8	2	16,0	10,8	26.000	57.319	254,8
18	3/4	2-1/4	20,7	13,9	33.300	73.413	326,3
20	13/16	2-1/2	25,2	16,9	39.800	87.743	390,0
22	7/8	2-3/4	30,5	20,5	47.500	104.781	465,5
24	1	3	35,6	23,9	54.900	121.032	538,0
26	1-1/32	3-1/4	41,0	27,6	62.400	137.566	611,5
28	1 1/8	3-1/2	46,5	31,2	70.100	154.541	687,0
30	1-1/4	3-3/4	51,5	34,6	76.900	169.533	753,6
32	1-5/16	4	56,7	38,1	83.900	184.965	822,2
34	1-3/8	4-1/4	62,0	41,7	90.900	200.397	890,8
36	1-1/2	4-1/2	67,2	45,2	97.800	215.608	958,4
38	1-9/16	4-3/4	73,0	49,1	105.400	232.365	1.032,9
40	1-5/8	5	79,3	53,3	113.800	250.882	1.115,2
44	1-3/4	5-1/2	94,3	63,4	133.700	294.753	1.310,3
48	2	6	111,9	75,2	156.800	345.679	1.536,6
52	2-1/8	6-1/2	132,2	88,8	183.100	403.660	1.794,4
56	2-1/4	7	153,6	103,2	210.200	463.404	2.060,0
60	2-1/2	7-1/2	176,4	118,5	238.500	525.794	2.337,3
64	2-5/8	8	200,7	134,9	268.100	591.049	2.627,4
68	2-3/4	8-1/2	226,5	152,2	299.000	659.171	2.930,2

**Major features:**

- ↑ 1/7 of the steel wire weight
- ↑ Longer life time compared to steel wire
- ↑ Low operational costs
- ↑ Low elongation
- ↑ Flexible, Non kinking and non rotating
- ↑ Easy and safer handling
- ↑ Easy to splice

Specific Gravity: 0,98 (floats)

Melting Point: 150°C

Elongation at % of BS:

25% .... 0,9%

50% .... 1,6%

**Main applications:**

- ↑ Mooring lines
- ↑ Anchor line
- ↑ Winch lines
- ↑ Towing and Tug ropes



Movline Plus is an extremely strong and high tenacity bi-polymer composite fiber extruded on a custom-built extrusion process. Its gripping capability is enhanced by the outer fuzzy surface developed in use, also protecting the inner fibers against abrasion. The 12 strands round plait construction improves its already good wear resistance.



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	35,5	23,9	13.850	30.534	135,7
30	1-1/4	3-3/4	40,8	27,4	15.800	34.832	154,8
32	1-5/16	4	46,4	31,2	17.900	39.462	175,4
34	1-3/8	4-1/4	52,6	35,3	20.300	44.753	198,9
36	1-1/2	4-1/2	58,7	39,4	22.750	50.154	223,0
38	1-9/16	4-3/4	65,6	44,1	25.400	55.996	248,9
40	1-5/8	5	72,5	48,7	28.050	61.839	274,9
44	1-3/4	5-1/2	87,7	58,9	33.550	73.964	328,8
48	2	6	104,0	69,9	39.050	86.089	382,7
52	2-1/8	6-1/2	122,0	82,0	43.650	96.230	427,8
56	2-1/4	7	142,0	95,4	49.400	108.907	484,1
60	2-1/2	7-1/2	163,0	109,5	55.600	122.575	544,9
64	2-5/8	8	186,0	125,0	62.200	137.125	609,6
68	2-3/4	8-1/2	210,0	141,1	69.850	153.990	684,5

**Major features:**

- ↑ High abrasion resistance
- ↑ High strength floating line
- ↑ No water absorption
- ↑ Good UV resistance
- ↑ Flexible, Non kinking and non rotating construction

Specific Gravity: 0,94 (floats)

Melting Point: 165°C

Elongation at % of BS:

25% .... 2,8%

50% .... 5,5%

**Main Applications:**

- ↑ Mooring lines
- ↑ Anchor lines
- ↑ Tug and Towing lines



# 12 STRAND



This blended rope combines the best properties of Polyester fiber with our Movline Plus bi-polymer fiber, in a unique 12 strands construction where every single Movline yarn is covered with Polyester, giving it an exceptional wearing resistance and strength with significantly less handling weight than regular polyester ropes.

## COMBO

### Major features:

- ↑ Exceptional abrasion and wear resistance on H-bitts
- ↑ 18-20 % lighter than regular polyester ropes
- ↑ Less water absorption than an all polyester ropes
- ↑ Flexible and smooth, Non kinking and non rotating

Specific Gravity: 1,16

Melting Point: 165°C / 265°C

Elongation at % of BS:

25% .... 3,2%

50% .... 6,7%

### Main applications:

- ↑ Mooring lines
- ↑ Anchor lines
- ↑ Tug boat H-Bitt working lines
- ↑ Barge working lines

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	38,0	25,5	13.270	29.250	130,0
30	1-1/4	3-3/4	43,7	29,4	15.110	33.300	148,0
32	1-1/4	4	49,7	33,4	17.050	37.580	167,0
34	1-11/32	4-1/4	56,3	37,8	19.240	42.410	188,5
36	1-7/16	4-1/2	62,9	42,3	21.430	47.250	210,0
38	1-1/2	4-3/4	70,3	47,2	23.830	52.540	233,5
40	1-19/32	5	77,6	52,1	26.230	57.820	257,0
44	1-3/4	5-1/2	93,9	63,1	31.430	69.300	308,0
48	1-7/8	6	111,0	74,6	37.150	81.890	364,0
52	2-1/16	6-1/2	132,0	88,7	43.270	95.390	424,0
56	2-1/4	7	152,0	102,1	49.900	110.020	489,0
60	2-3/8	7-1/2	175,0	117,6	56.940	125.540	558,0
64	2-1/2	8	199,0	133,7	64.390	141.960	631,0
68	2-11/16	8-1/2	257,0	171,2	80.520	177.510	789,0



Combining the abrasion resistance of Polyester with the tenacity of Movline bi-polymer fiber, its round plait construction provides a soft and flexible handling. Lighter than traditional combo ropes and with very low water absorption, this floating line is an economic solution when compared to regular polyester ropes.

## MOVSTER<sup>®</sup> COTESI

### Major features:

- ↑ High abrasion and wear resistance
- ↑ 12-14% lighter than traditional combo ropes
- ↑ Very low water absorption
- ↑ Flexible and smooth handling, Non kinking and non rotating

Specific Gravity: 1,00 (floats)

Melting Point: 165°C / 265°C

Elongation at % of BS:

25% .... 3,9%

50% .... 8,3%

### Main applications:

- ↑ Mooring lines
- ↑ Anchor lines
- ↑ Tie-up lines
- ↑ Barge working lines

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	38,0	25,5	13.270	29.250	130,0
30	1-3/16	3-3/4	43,7	29,4	15.110	33.300	148,0
32	1-1/4	4	49,7	33,4	17.050	37.580	167,0
34	1-11/32	4-1/4	56,3	37,8	19.240	42.410	188,5
36	1-7/16	4-1/2	62,9	42,3	21.430	47.250	210,0
38	1-1/2	4-3/4	70,3	47,2	23.830	52.540	233,5
40	1-19/32	5	77,6	52,1	26.230	57.820	257,0
44	1-3/4	5-1/2	93,9	63,1	31.430	69.300	308,0
48	1 7/8	6	111,0	74,6	37.150	81.890	364,0
52	2-1/16	6-1/2	132,0	88,7	43.270	95.390	424,0
56	2-1/4	7	152,0	102,1	49.900	110.020	489,0
60	2-3/8	7-1/2	175,0	117,6	56.940	125.540	558,0
64	2-1/2	8	199,0	133,7	64.390	141.960	631,0
68	2-11/16	8-1/2	225,5	151,5	72.450	159.740	710,0





A 12 strands round plait line that combines the high tenacity, abrasion and wear resistance of polyester with Spun PP. This very special blend along with its unique construction that perfectly combines these two fibers, gives this rope a superb handling and touch, highly appreciated by national marine defence fleets.

## BERTHING ROPE

### Major features:

- ↑ Superb handling and touch
- ↑ Good abrasion and wear resistance
- ↑ Low water absorption
- ↑ Flexible, Non kinking and non rotating

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	47,3	31,8	10.200	22.487	100,0
30	1-1/4	3-3/4	54,3	36,5	10.800	23.810	105,8
32	1-5/16	4	61,4	41,3	12.200	26.896	119,6
34	1-3/8	4-1/4	68,7	46,2	13.650	30.093	133,8
36	1-1/2	4-1/2	76,0	51,1	15.100	33.289	148,0
38	1-9/16	4-3/4	85,5	57,5	17.000	37.478	166,6
40	1-5/8	5	95,0	63,8	18.900	41.667	185,2
44	1-3/4	5-1/2	117,5	79,0	22.600	49.824	221,5
48	2	6	136,4	91,7	25.950	57.209	254,3
52	2-1/8	6-1/2	160,0	107,5	30.100	66.358	295,0
56	2-1/4	7	185,0	124,3	34.500	76.058	338,1
60	2-1/2	7-1/2	212,0	142,5	39.150	86.310	383,7
64	2-5/8	8	242,0	162,6	44.200	97.443	433,2
68	2-3/4	8-1/2	273,2	183,6	49.500	109.127	485,1

Specific Gravity: 1,16

Melting Point: 165°C / 265°C

Elongation at % of BS:

25% .... 3,5%

50% .... 7,9%

### Main applications:

- ↑ Mooring lines
- ↑ Anchor lines



The appearance and construction of old ropes made from natural fibres, with the strength, abrasion and wear resistance of synthetic materials. This polypropylene floating line has a smooth and fine touch and its hairy surface enhances wear resistance to this light weight rope, very easy to handle and easy to splice.

## MOVSPUN<sup>®</sup> COTESI

### Major features:

- ↑ Smoothness and exceptional touch
- ↑ Good abrasion and wear resistance
- ↑ Floating, no water absorption
- ↑ Good UV resistance
- ↑ Flexible, Non kinking and non rotating

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	34,0	22,8	10.700	23.589	104,9
30	1-1/4	3-3/4	40,5	27,2	12.150	26.786	119,1
32	1-5/16	4	46,0	30,9	13.650	30.093	133,8
34	1-3/8	4-1/4	52,3	35,1	15.350	33.840	150,4
36	1-1/2	4-1/2	58,5	39,3	17.050	37.588	167,1
38	1-9/16	4-3/4	65,3	43,8	18.950	41.777	185,7
40	1-5/8	5	72,0	48,4	20.800	45.855	203,8
44	1-3/4	5-1/2	88,0	59,1	24.800	54.674	243,0
48	2	6	104,0	69,9	29.200	64.374	286,2
52	2-1/8	6-1/2	122,0	82,0	33.900	74.735	332,2
56	2-1/4	7	142,0	95,4	38.900	85.758	381,2
60	2-1/2	7-1/2	163,0	109,5	44.200	97.443	433,2
64	2-5/8	8	185,0	124,3	49.800	109.788	488,0
68	2-3/4	8-1/2	209,5	140,8	55.900	123.236	547,8

Specific Gravity: 0,91 (floats)

Melting Point: 165°C

Elongation at % of BS:

25% .... 4,0%

50% .... 7,5%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines



# 12 STRAND



Movflex is a special composite rope that mixes high tenacity polyester yarns with high tenacity multifilament polypropylene yarns. This specific combination that gives it floating proprieties along with its firm, round and non rotational construction, provides excellent abrasion and heat resistance, while its flexibility assures a good handling.

## MOVFLEX FLOATING

### Major features:

- ↑ Exceptional abrasion and wear resistance even in wet conditions
- ↑ 38-40 % lighter than regular polyester ropes
- ↑ Very low water absorption
- ↑ Flexible and smooth, Non kinking and non rotating
- ↑ Excellent UV resistance
- ↑ Floating

Specific Gravity: 0,99

Melting Point: 265°C / 165°C

Elongation at % of BS:

25% .... 4,0%

50% .... 6,0%

### Major features:

- ↑ Mooring lines
- ↑ Towing lines

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	42,2	28,4	12.000	26.455	117,6
30	1-1/4	3-3/4	48,5	32,6	12.800	28.219	125,4
32	1- 5/16	4	55,3	37,2	14.550	32.077	142,6
34	1-3/8	4-1/4	62,6	42,0	16.450	36.265	161,2
36	1-1/2	4-1/2	69,8	46,9	18.350	40.454	179,8
38	1-9/16	4-3/4	76,7	51,5	20.150	44.422	197,5
40	1-5/8	5	83,5	56,1	21.950	48.391	215,1
44	1- 3/4	5-1/2	103,5	69,5	27.950	61.618	273,9
48	2	6	121,5	81,6	32.450	71.539	318,0
52	2-1/8	6-1/2	142,5	95,8	37.650	83.003	369,0
56	2-1/4	7	166,0	111,5	43.450	95.789	425,8
60	2-1/2	7-1/2	190,5	128,0	49.000	108.025	480,2
64	2-5/8	8	216,5	145,5	55.600	122.575	544,9
68	2-3/4	8-1/2	245,3	164,8	62.500	137.787	612,5



Movflex is a special composite rope that mixes high tenacity polyester yarns with high tenacity multifilament polypropylene yarns. This distinct combination gives it excellent fatigue proprieties comparable to an all polyester ropes but with less handling weight. Its firm, round and non rotational construction, provides excellent abrasion and heat resistance to this flexibility sinking rope.

## MOVFLEX SINKING

### Major features:

- ↑ Exceptional abrasion and wear resistance even in wet conditions
- ↑ 18-20 % lighter than regular polyester ropes
- ↑ Low water absorption
- ↑ Flexible and smooth, Non kinking and non rotating
- ↑ Excellent UV resistance
- ↑ Sinks

Specific Gravity: 1,10

Melting Point: 265°C / 165°C

Elongation at % of BS:

25% .... 4,0%

50% .... 6,0%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	47,3	31,8	12.300	27.116	120,5
30	1-1/4	3-3/4	54,3	36,5	13.250	29.211	129,9
32	1-5/16	4	61,9	41,6	15.100	33.289	148,0
34	1-3/8	4-1/4	70,0	47,1	17.000	37.478	166,6
36	1-1/2	4-1/2	78,2	52,5	18.950	41.777	185,7
38	1-9/16	4-3/4	85,8	57,7	20.800	45.855	203,8
40	1-5/8	5	93,5	62,8	22.650	49.934	222,0
44	1-3/4	5-1/2	115,9	77,9	28.400	62.610	278,3
48	2	6	136,1	91,4	33.000	72.751	323,4
52	2-1/8	6-1/2	159,6	107,2	38.350	84.546	375,8
56	2-1/4	7	185,9	124,9	44.250	97.553	433,7
60	2-1/2	7-1/2	213,3	143,3	50.350	111.001	493,4
64	2-5/8	8	242,4	162,9	56.750	125.110	556,2
68	2-3/4	8-1/2	274,6	184,5	63.750	140.542	624,8





Polyamide ropes provides high breaking strengths while its high elongation works as an excellent energy absorber. Its very good abrasion and heat resistance is improved by the 12 strand round plait construction even in wet conditions, while the quality of fibers insure a perfect twist and lay tension reducing natural shrinkage during use.

## POLYAMIDE

### Major features:

- ↑ Excellent shock mitigation
- ↑ Good abrasion and wear resistance in wet conditions
- ↑ Good UV resistance
- ↑ Flexible, Non kinking and non rotating

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	48,5	32,6	15.200	33.510	149,0
30	1-1/4	3-3/4	55,5	37,3	17.350	38.250	170,0
32	1-5/16	4	63,0	42,3	19.600	43.210	192,1
34	1-3/8	4-1/4	71,5	48,0	22.050	48.611	216,1
36	1-1/2	4-1/2	80,0	53,8	24.500	54.012	240,1
38	1-9/16	4-3/4	89,5	60,1	27.250	60.075	267,1
40	1-5/8	5	99,0	66,5	30.000	66.138	294,0
44	1-3/4	5-1/2	120,0	80,6	35.800	78.924	350,8
48	2	6	142,0	95,4	42.050	92.703	412,1
52	2-1/8	6-1/2	166,0	111,5	48.900	107.804	479,2
56	2-1/4	7	193,0	129,7	56.100	123.677	549,8
60	2-1/2	7-1/2	221,0	148,5	64.000	141.093	627,2
64	2-5/8	8	252,0	169,3	72.350	159.502	709,0
68	2-3/4	8-1/2	285,5	191,8	81.450	179.563	798,2

Specific Gravity: 1,14  
 Melting Point: 260°C  
 Elongation at % of BS:  
 25% .... 11,0%  
 50% .... 18,0%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines
- ↑ Shock lines



Polyamide Double Braided ropes provide high breaking strengths while its high elongation works as an excellent energy absorber. Quality of fibers insure a perfect twist and lay tension reducing polyamide natural shrinkage during use. The braided core and cover are oriented to maximize strength, abrasion and heat resistance even in wet conditions.

## POLYAMIDE DB

### Major features:

- ↑ Excellent energy absorption
- ↑ Good abrasion and wear resistance even in wet conditions
- ↑ Good UV resistance
- ↑ High flexibility, Non kinking and non rotating

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
6	1/4	3/4	2,4	1,6	907	2.000	9,3
8	5/16	1	3,9	2,6	1.315	2.900	13,4
10	3/8	1-1/8	5,5	3,7	1.905	4.200	19,4
12	1/2	1-1/2	9,8	6,6	3.311	7.300	33,8
14	9/16	1-3/4	13,9	9,3	4.581	10.100	46,7
16	5/8	2	17,9	12,0	5.851	12.900	59,7
18	3/4	2-1/4	22,3	15,0	7.258	16.000	74,1
20	13/16	2-1/2	27,5	18,5	9.231	20.350	94,2
22	7/8	2-3/4	32,7	22,0	11.204	24.700	114,3
24	1	3	38,7	26,0	13.880	30.600	141,6
26	1-1/32	3-1/4	46,2	31,0	15.627	34.450	159,5
28	1-1/8	3-1/2	53,6	36,0	17.373	38.300	177,3
30	1-1/4	3-3/4	61,0	41,0	20.049	44.200	204,6
32	1-5/16	4	64,7	43,5	22.861	50.400	233,3
36	1-1/2	4-1/2	89,3	60,0	29.166	64.300	297,6
40	1-5/8	5	110,0	73,9	35.472	78.200	362,0
44	1-3/4	5-1/2	132,0	88,7	43.591	96.100	444,8
48	2	6	158,0	106,2	50.350	111.000	513,8
52	2-1/8	6-1/2	185,0	124,3	59.875	132.000	611,0
56	2-1/4	7	214,0	143,8	68.040	150.000	694,3
60	2-1/2	7-1/2	246,0	165,3	78.019	172.000	796,1
64	2-5/8	8	280,0	188,1	88.906	196.000	907,2

Specific Gravity: 1,14  
 Melting Point: 260°C  
 Elongation at % of BS:  
 25% .... 6,7%  
 50% .... 11,4%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines
- ↑ Shock lines



# 12 STRAND



The smoothness and high tenacity characteristics of polyester are empowered by a firm round plait 12 strands construction enhancing its excellent abrasion and high heat resistance, creating a durable high tenacity rope with low elongation and excellent fatigue life.

## POLYESTER

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	59,4	39,9	11.850	26.124	116,1
30	1-1/4	3-3/4	68,2	45,8	13.450	29.652	131,8
32	1-5/16	4	77,8	52,3	15.300	33.730	149,9
34	1-3/8	4-1/4	88,0	59,1	17.250	38.029	169,1
36	1-1/2	4-1/2	98,2	66,0	19.200	42.328	188,2
38	1-9/16	4-3/4	109,6	73,6	21.350	47.068	209,2
40	1-5/8	5	121,0	81,3	23.450	51.698	229,8
44	1-3/4	5-1/2	147,0	98,8	28.150	62.059	275,9
48	2	6	175,0	117,6	33.250	73.302	325,9
52	2-1/8	6-1/2	205,0	137,8	38.750	85.428	379,8
56	2-1/4	7	238,0	159,9	44.600	98.325	437,1
60	2-1/2	7-1/2	273,0	183,4	51.000	112.434	499,8
64	2-5/8	8	311,0	209,0	57.750	127.315	566,0
68	2-3/4	8-1/2	352,3	236,7	65.000	143.298	637,0

### Major features:

- ↑ High heat and abrasion resistance
- ↑ High strength and low working elongation
- ↑ Excellent UV resistance
- ↑ Flexible, Non kinking and non rotating

Specific Gravity: 1,38

Melting Point: 265°C

Elongation at % of BS:

25% .... 5,0%

50% .... 8,0%

### Main applications:

- ↑ Mooring lines
- ↑ Mooring pendants
- ↑ Tug and towing lines





Made from HMWPE fibres and protected by a self unique impregnation that improves its abrasion resistance, Cotesi D-tech ropes must be considered when high breaking strengths are required. Stronger than steel wire of same weight, have proven to be a cost-saving replacement for wire rope in several applications. Its 8-strands plaited construction is smooth and non rotational.



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	20,2	13,5	23.900	52.690	234,2
26	1-1/32	3-1/4	23,7	15,9	28.000	61.728	274,4
28	1-1/8	3-1/2	27,4	18,4	32.500	71.649	318,5
30	1-1/4	3-3/4	31,5	21,2	37.300	82.231	365,5
32	1-5/16	4	31,7	21,3	37.600	82.892	368,5
34	1-3/8	4-1/4	36,0	24,2	42.600	93.915	417,5
36	1-1/2	4-1/2	40,2	27,0	47.600	104.938	466,5
40	1-5/8	5	49,6	33,3	58.800	129.630	576,2
44	1-3/4	5-1/2	60,0	40,3	71.100	156.746	696,8
48	2	6	71,4	48,0	84.000	185.185	823,2
52	2-1/8	6-1/2	83,8	56,3	98.000	216.049	960,4
56	2-1/4	7	97,2	65,3	112.800	248.677	1105,4
60	2-1/2	7-1/2	111,6	75,0	128.450	283.179	1258,8
64	2-5/8	8	127,0	85,3	145.000	319.665	1421,0
72	3	9	160,7	108,0	180.600	398.148	1769,9
80	3-1/4	10	198,4	133,3	217.550	479.608	2132,0
88	3-5/8	11	240,1	161,3	258.950	570.877	2537,7
96	4	12	285,7	192,0	303.000	667.989	2969,4
104	4-1/4	13	335,3	225,3	343.550	757.385	3366,8
112	4-5/8	14	388,9	261,3	391.600	863.316	3837,7
120	5	15	446,4	300,0	441.700	973.765	4328,7
128	5-1/4	16	507,9	341,3	485.100	1.069.444	4754,0
136	5-1/2	17	573,4	385,3	536.500	1.182.760	5257,7

**Major features:**

- ↑ 1/7 of the steel wire weight
- ↑ Longer life time compared to steel wire
- ↑ Low operational costs
- ↑ Low elongation
- ↑ Non kinking and non rotating construction
- ↑ Easy and safer handling
- ↑ Very Easy to splice

Specific Gravity: 0,98 (floats)

Melting Point: 150°C

Elongation at % of BS:

25% .... 0,9%

50% .... 1,6%

**Main applications:**

- ↑ Mooring lines
- ↑ Anchor line
- ↑ Winch lines
- ↑ Towing and Tug ropes



Movline plus ropes are made from a high tenacity composite fiber extruded on a custom-built extrusion process. This extremely strong bi-polymer associated to an 8 strands plaited construction, results on a rope with good wear resistance and exceptional gripping capabilities that are enhanced by the outer fuzzy surface developed in use, also protecting the inner fibers against abrasion.



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	36,8	24,7	14.200	31.305	139,2
30	1-1/4	3-3/4	42,0	28,2	16.100	35.494	157,8
32	1-5/16	4	47,5	31,9	18.250	40.234	178,9
34	1-3/8	4-1/4	54,0	36,3	20.550	45.304	201,4
36	1-1/2	4-1/2	60,5	40,7	22.850	50.375	223,9
40	1-5/8	5	74,5	50,1	27.950	61.618	273,9
44	1-3/4	5-1/2	91,0	61,1	33.350	73.523	326,8
48	2	6	107,5	72,2	39.300	86.640	385,1
52	2-1/8	6-1/2	126,0	84,7	45.700	100.750	447,9
56	2-1/4	7	146,5	98,4	52.450	115.631	514,0
60	2-1/2	7-1/2	168,0	112,9	59.500	131.173	583,1
64	2-5/8	8	190,0	127,7	67.050	147.817	657,1
72	3	9	240,0	161,3	83.650	184.414	819,8
80	3-1/4	10	297,0	199,6	101.550	223.876	995,2
88	3-5/8	11	360,0	241,9	121.400	267.637	1189,7
96	4	12	428,0	287,6	142.850	314.925	1399,9
104	4-1/4	13	500,0	336,0	165.300	364.418	1619,9
112	4-5/8	14	580,0	389,7	191.850	422.950	1880,1
120	5	15	660,0	443,5	217.350	479.167	2130,0
128	5-1/4	16	750,0	504,0	246.900	544.312	2419,6
136	5-1/2	17	850,0	571,2	277.550	611.883	2720,0

**Major features:**

- ↑ High abrasion resistance
- ↑ High strength floating line
- ↑ No water absorption
- ↑ Good UV resistance
- ↑ Non kinking and non rotating construction

Specific Gravity: 0,94

Melting Point: 165°C

Elongation at % of BS:

25% .... 2,8%

50% .... 5,5%

**Main applications:**

- ↑ Mooring lines
- ↑ Anchor lines
- ↑ Tug and Towing lines





This blended rope combines the best properties of Polyester fiber with our Movline bi-polymer fiber in a unique 8 strands plaited construction where every single Movline yarn is covered with Polyester, giving it an exceptional wearing resistance and strength with significantly less handling weight than regular polyester ropes.

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	43,4	32,2	14.700	32.400	144,0
30	1-3/16	3-3/4	49,8	36,9	16.740	36.900	164,0
32	1 1/4	4	56,6	42,0	18.980	41.850	186,0
34	1-11/32	4-1/4	64,15	47,6	21.380	47.140	209,5
36	1-7/16	4-1/2	71,7	53,1	23.780	52.420	233,0
40	1-19/32	5	88,5	65,5	29.090	64.120	285,0
44	1-3/4	5-1/2	107,0	79,7	34.900	76.950	342,0
48	1-7/8	6	127,0	94,7	41.230	90.890	404,0
52	2-1/16	6-1/2	150,0	110,9	48.070	105.970	471,0
56	2-1/4	7	173,0	128,9	55.410	122.160	543,0
60	2-3/8	7-1/2	199,0	147,9	63.270	139.490	620,0
64	2-1/2	8	227,0	168,3	71.540	157.710	701,0
72	2-7/8	9	287,0	174,0	89.490	197.310	877,0
80	3-5/32	10	354,0	262,8	109.190	240.720	1070,0
88	3-7/16	11	428,0	317,8	131.640	290.220	1290,0
96	3-13/16	12	510,0	378,3	155.110	341.960	1520,0
104	4-1/8	13	600,0	443,2	180.620	398.210	1770,0
112	4-7/16	14	690,0	513,7	208.170	458.950	2040,0
120	4-3/4	15	796,0	588,3	237.760	524.190	2330,0
128	5	16	906,0	669,3	268.370	591.680	2630,0
136	5-3/8	17	1020,0	756,6	302.050	665.920	2960,0

## COMBO

### Major features:

- ↑ Exceptional abrasion and wear resistance
- ↑ 18-20 % lighter than an all polyester constructions
- ↑ Less water absorption than an all polyester ropes
- ↑ Smooth, Non kinking and non rotating

Specific Gravity: 1,16

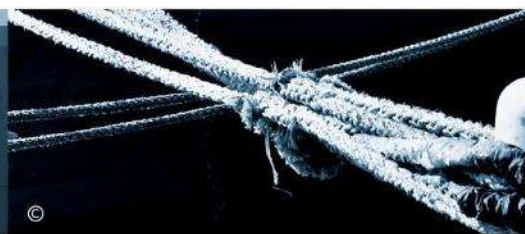
Melting Point: 165°C / 265°C

Elongation at % of BS:

25% .... 3,2%  
50% .... 6,7%

### Main applications:

- ↑ Mooring lines
- ↑ Anchor lines
- ↑ Tug boat H-Bitt working lines
- ↑ Barge working lines



Combining the abrasion resistance of Polyester with the tenacity of Movline Plus bi-polymer fiber, its 8 strands plaited construction provides a soft and flexible handling. Lighter than traditional combo ropes and with very low water absorption, this floating line is an economic solution when compared to an all polyester ropes.



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	38,0	25,5	13.270	29.250	130,0
30	1-3/16	3-3/4	43,7	29,4	15.110	33.300	148,0
32	1-1/4	4	49,7	33,4	17.050	37.580	167,0
34	1-11/32	4-1/4	56,3	37,8	19.240	42.410	188,5
36	1-7/16	4-1/2	62,9	42,3	21.430	47.250	210,0
40	1-19/32	5	77,6	52,1	26.230	57.820	257,0
44	1-3/4	5-1/2	93,9	63,1	31.430	69.300	308,0
48	1-7/8	6	111,0	74,6	37.150	81.890	364,0
52	2-1/16	6-1/2	132,0	88,7	43.270	95.390	424,0
56	2-1/4	7	152,0	102,1	49.900	110.020	489,0
60	2-3/8	7-1/2	175,0	117,6	56.940	125.540	558,0
64	2-1/2	8	199,0	133,7	64.390	141.960	631,0
72	2-7/8	9	252,0	169,3	80.520	177.510	789,0
80	3-5/32	10	311,0	209,0	98.270	216.650	963,0
88	3-7/16	11	375,0	252,0	118.370	260.970	1160,0
96	3-13/16	12	447,0	300,4	139.800	308.220	1370,0
104	4-1/8	13	526,0	353,4	162.250	357.710	1590,0
112	4-7/16	14	605,0	406,5	187.760	413.950	1840,0
120	4-3/4	15	698,0	569,0	214.290	472.450	2100,0
128	5	16	795,0	534,2	241.840	533.190	2370,0
136	5-3/8	17	895,0	601,4	271.430	598.430	2660,0

### Major features:

- ↑ High abrasion and wear resistance
- ↑ 12-14% lighter than traditional combo ropes
- ↑ Very low water absorption
- ↑ Flexible and smooth handling, Non kinking and non rotating

Specific Gravity: 1,00 (floats)

Melting Point: 165°C / 265°C

Elongation at % of BS:

25% .... 3,9%  
50% .... 8,3%

### Main applications:

- ↑ Mooring lines
- ↑ Anchor lines
- ↑ Tie-up lines
- ↑ Barge working lines





An 8 strands plaited rope that combines Polyester's high tenacity, abrasion and wear resistance with traditional PP spun. This very special blend along with its unique construction that perfectly combines these two fibers, gives this rope a superb handling and touch, highly appreciated by national marine defence fleets.

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	34,0	22,8	7.000	15.432	68,6
26	1-1/32	3-1/4	40,7	27,3	8.400	18.519	82,3
28	1-1/8	3-1/2	47,3	31,8	9.750	21.495	95,6
30	1-1/4	3-3/4	54,0	36,3	10.300	22.707	100,9
32	1-5/16	4	61,4	41,3	11.700	25.794	114,7
34	1-3/8	4-1/4	68,7	46,2	13.100	28.880	128,4
36	1-1/2	4-1/2	76,0	51,1	14.500	31.966	142,1
40	1-5/8	5	95,0	63,8	18.100	39.903	177,4
44	1-3/4	5-1/2	117,5	79,0	21.650	47.729	212,2
48	2	6	136,4	91,7	24.850	54.784	243,5
52	2-1/8	6-1/2	160,0	107,5	28.850	63.602	282,7
56	2-1/4	7	185,0	124,3	33.000	72.751	323,4
60	2-1/2	7-1/2	212,0	142,5	37.450	82.562	367,0
64	2-5/8	8	242,0	162,6	42.300	93.254	414,5
72	3	9	306,0	205,6	52.700	116.182	516,5
80	3-1/4	10	378,0	254,0	63.600	140.212	623,3
88	3-5/8	11	457,0	307,1	76.200	167.989	746,8
96	4	12	545,0	366,2	89.450	197.200	876,6
104	4-1/4	13	640,0	430,1	102.350	225.639	1003,0
112	4-5/8	14	740,0	497,2	117.250	258.488	1149,1
120	5	15	850,0	571,2	133.400	294.092	1307,3
128	5-1/4	16	964,0	647,8	147.200	324.515	1442,6
136	5-1/2	17	1093,0	734,4	166.000	365.961	1626,8

## BERTHING ROPE

### Major features:

- ↑ Superb handling and touch
- ↑ Good abrasion and wear resistance
- ↑ Low water absorption
- ↑ Flexible, Non kinking and non rotating

Specific Gravity: 1,16

Melting Point: 165°C / 265°C

Elongation at % of BS:

25% .... 3,5%

50% .... 7,9%

### Main applications:

- ↑ Mooring lines
- ↑ Anchor lines



The appearance and construction of old ropes made from natural fibres, with the strength, abrasion and wear resistance of synthetic materials. This polypropylene floating line has a smooth and fine touch and its hairy surface enhances wear resistance to this light weight rope, very easy to handle and easy to splice.

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	34,0	22,8	10.700	23.589	104,9
30	1-1/4	3-3/4	40,5	27,2	12.150	26.786	119,1
32	1-5/16	4	46,0	30,9	13.700	30.203	134,3
34	1-3/8	4-1/4	52,3	35,1	15.350	33.840	150,4
36	1-1/2	4-1/2	58,5	39,3	17.050	37.588	167,1
40	1-5/8	5	72,0	48,4	20.800	45.855	203,8
44	1-3/4	5-1/2	88,0	59,1	24.800	54.674	243,0
48	2	6	104,0	69,9	29.200	64.374	286,2
52	2-1/8	6-1/2	122,0	82,0	33.900	74.735	332,2
56	2-1/4	7	142,0	95,4	38.900	85.758	381,2
60	2-1/2	7-1/2	163,0	109,5	44.200	97.443	433,2
64	2-5/8	8	185,0	124,3	49.800	109.788	488,0
72	3	9	234,0	157,2	62.050	136.795	608,1
80	3-1/4	10	290,0	194,9	75.500	166.446	739,9
88	3-5/8	11	351,0	235,9	90.500	199.515	886,9
96	4	12	417,0	280,2	106.100	233.907	1039,8
104	4-1/4	13	490,0	329,3	123.450	272.156	1209,8
112	4-5/8	14	570,0	383,0	141.850	312.720	1390,1
120	5	15	650,0	436,8	161.200	355.379	1579,8
128	5-1/4	16	740,0	497,2	181.650	400.463	1780,2
136	5-1/2	17	840,0	564,4	204.100	449.956	2000,2

## MOVSPUN<sup>®</sup> COTESI

### Major features:

- ↑ Smoothness and exceptional touch
- ↑ Good abrasion and wear resistance
- ↑ Floating, no water absorption
- ↑ Good UV resistance
- ↑ Flexible, Non kinking and non rotating

Specific Gravity: 0,91 (floats)

Melting Point: 165°C

Elongation at % of BS:

25% .... 4,0%

50% .... 7,5%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines



# 8 STRAND



Movflex is a special composite rope that mixes high tenacity polyester yarns with high tenacity polypropylene multifilament yarns. This specific combination gives this firm non rotational 8 strands plaited rope, flexibility, excellent abrasion and heat resistance, conferring it floating properties.

## MOVFLEX FLOATING

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3 1/2	42,2	28,4	12.000	26.455	117,6
30	1-1/4	3-3/4	48,5	32,6	12.800	28.219	125,4
32	1-5/16	4	55,3	37,2	14.550	32.077	142,6
34	1-3/8	4-1/4	62,6	42,0	16.450	36.265	161,2
36	1-1/2	4-1/2	69,8	46,9	18.350	40.454	179,8
40	1-5/8	5	83,5	56,1	21.950	48.391	215,1
44	1-3/4	5-1/2	103,5	69,5	27.950	61.618	273,9
48	2	6	121,5	81,6	32.450	71.539	318,0
52	2-1/8	6-1/2	142,5	95,8	37.650	83.003	369,0
56	2-1/4	7	166,0	111,5	43.450	95.789	425,8
60	2-1/2	7-1/2	190,5	128,0	49.400	108.907	484,1
64	2-5/8	8	216,5	145,5	55.600	122.575	544,9
72	3	9	274,0	184,1	69.350	152.888	679,6
80	3-1/4	10	335,0	225,1	82.900	182.760	812,4
88	3-5/8	11	408,0	274,2	100.050	220.569	980,5
96	4	12	485,0	325,9	117.200	258.377	1148,6
104	4-1/4	13	566,0	380,3	133.300	293.871	1306,3
112	4-5/8	14	658,0	442,1	153.500	338.404	1504,3
120	5	15	755,0	507,3	174.500	384.700	1710,1
128	5-1/4	16	882,5	593,0	209.900	462.743	2057,0
136	5-1/2	17	996,1	669,3	235.300	518.739	2305,9

### Major features:

- ↑ Exceptional abrasion and wear resistance even in wet conditions
- ↑ 38-40 % lighter than an all polyester ropes
- ↑ Flexible and smooth, Non kinking and non rotating
- ↑ Excellent UV resistance
- ↑ Floating, very low water absorption

Specific Gravity: 0,99

Melting Point: 265°C / 165°C

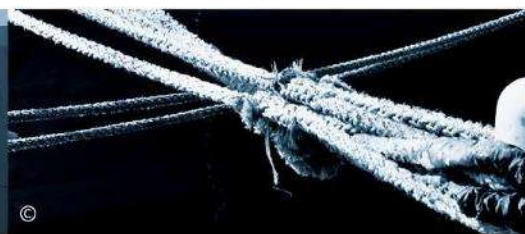
Elongation at % of BS:

25% .... 4,0%

50% .... 6,0%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines



Movflex is a special composite rope that mixes high tenacity polyester yarns with high tenacity polypropylene multifilament yarns. This distinct combination gives it excellent fatigue properties when compared to an all polyester rope but with less handling weight. Its firm plaited and non rotational construction provides flexibility, excellent abrasion and heat resistance to a rope that sinks.

## MOVFLEX SINKING

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	47,3	31,8	12.300	27.116	120,5
30	1-1/4	3-3/4	54,3	36,5	13.250	29.211	129,9
32	1-5/16	4	61,9	41,6	15.100	33.289	148,0
34	1-3/8	4-1/4	70,0	47,1	17.000	37.478	166,6
36	1-1/2	4-1/2	78,2	52,5	18.900	41.667	185,2
40	1-5/8	5	93,5	62,8	22.600	49.824	221,5
44	1-3/4	5-1/2	115,9	77,9	28.400	62.610	278,3
48	2	6	136,1	91,4	33.000	72.751	323,4
52	2-1/8	6-1/2	159,6	107,2	38.300	84.436	375,3
56	2-1/4	7	185,9	124,9	44.250	97.553	433,7
60	2-1/2	7-1/2	213,3	143,3	50.350	111.001	493,4
64	2-5/8	8	242,4	162,9	56.750	125.110	556,2
72	3	9	306,8	206,2	70.800	156.085	693,8
80	3-1/4	10	375,1	252,1	84.750	186.839	830,6
88	3-5/8	11	456,9	307,0	102.300	225.529	1002,5
96	4	12	543,1	365,0	120.000	264.550	1176,0
104	4-1/4	13	633,8	425,9	136.500	300.926	1337,7
112	4-5/8	14	736,9	495,1	157.300	346.781	1541,5
120	5	15	845,5	568,1	179.000	394.621	1754,2
128	5-1/4	16	988,3	664,1	223.300	492.284	2188,3
136	5-1/2	17	1115,5	749,5	251.200	553.792	2461,8

### Major features:

- ↑ Exceptional abrasion and wear resistance even in wet conditions
- ↑ 18-20 % lighter than regular polyester ropes
- ↑ Low water absorption
- ↑ Flexible and smooth, Non kinking and non rotating
- ↑ Excellent UV resistance
- ↑ Sinks

Specific Gravity: 1,10

Melting Point: 265°C / 165°C

Elongation at % of BS:

25% .... 4,0%

50% .... 6,0%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines







Deckline ropes are a special blend, focused in economy, that combines the abrasion resistance and tenacity of our Movline Plus bi-polymer. This cost effective floating rope has good wear and abrasion resistance given by the outer Movline Plus cover and high breaking resistance when compared to other tradition PP ropes.

## DECKLINE

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	36,8	24,7	12.200	26.896	119,6
30	1-1/4	3-3/4	42,0	28,2	13.750	30.313	134,8
32	1-5/16	4	47,5	31,9	15.550	34.281	152,4
34	1-3/8	4-1/4	54,0	36,3	17.700	39.021	173,5
36	1-1/2	4-1/2	60,5	40,7	19.800	43.651	194,0
40	1-5/8	5	74,5	50,1	24.400	53.792	239,1
44	1-3/4	5-1/2	91,0	61,1	30.500	67.240	298,9
48	2	6	107,5	72,2	35.550	78.373	348,4
52	2-1/8	6-1/2	126,0	84,7	39.750	87.632	389,6
56	2-1/4	7	146,5	98,4	45.000	99.206	441,0
60	2-1/2	7-1/2	168,0	112,9	50.750	111.883	497,4
64	2-5/8	8	190,0	127,7	56.700	125.000	555,7
72	3	9	240,0	161,3	70.600	155.644	691,9
80	3-1/4	10	297,0	199,6	85.950	189.484	842,3
88	3-5/8	11	360,0	241,9	103.200	227.513	1011,4
96	4	12	428,0	287,6	121.350	267.526	1189,2
104	4-1/4	13	500,0	336,0	136.100	300.044	1333,8
112	4-5/8	14	580,0	389,7	157.000	346.120	1538,6
120	5	15	660,0	443,5	178.350	393.188	1747,8
128	5-1/4	16	750,0	504,0	198.850	438.382	1948,7
136	5-1/2	17	850,0	571,2	224.850	495.701	2203,5

### Major features:

- ↑ Cost effective compared to traditional PP ropes
- ↑ High abrasion resistance
- ↑ Good breaking strength
- ↑ Excellent UV resistance
- ↑ Non kinking and non rotating

Specific Gravity: 0,93

Melting Point: 165°C

Elongation at % of BS:  
25% .... 2,8%  
50% .... 5,5%

### Main applications:

- ↑ Mooring lines
- ↑ Tug and Towing lines



Polyamide ropes provide high breaking strength while its high elongation works as an excellent energy absorber. Its very good abrasion and heat resistance are enhanced by the 8 strands plaited construction, even in wet conditions, while the quality of fibers insure a perfect twist and lay tension, reducing natural shrinkage in use.

## POLYAMIDE

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	48,5	32,6	15.200	33.510	149,0
30	1-1/4	3-3/4	55,5	37,3	17.350	38.250	170,0
32	1-5/16	4	63,0	42,3	19.600	43.210	192,1
34	1-3/8	4-1/4	71,5	48,0	22.050	48.611	216,1
36	1-1/2	4-1/2	80,0	53,8	24.500	54.012	240,1
40	1-5/8	5	99,0	66,5	30.000	66.138	294,0
44	1-3/4	5-1/2	120,0	80,6	35.800	78.924	350,8
48	2	6	142,0	95,4	42.050	92.703	412,1
52	2-1/8	6-1/2	166,0	111,5	48.900	107.804	479,2
56	2-1/4	7	193,0	129,7	56.100	123.677	549,8
60	2-1/2	7-1/2	221,0	148,5	64.000	141.093	627,2
64	2-5/8	8	252,0	169,3	72.350	159.502	709,0
72	3	9	319,0	214,4	90.500	199.515	886,9
80	3-1/4	10	394,0	264,8	110.200	242.945	1080,0
88	3-5/8	11	477,0	320,5	132.650	292.438	1300,0
96	4	12	568,0	381,7	156.100	344.136	1529,8
104	4-1/4	13	666,0	447,5	181.600	400.353	1779,7
112	4-5/8	14	772,0	518,8	209.150	461.089	2049,7
120	5	15	887,0	596,0	238.800	526.455	2340,2
128	5-1/4	16	1010,0	678,7	270.400	596.120	2649,9
136	5-1/2	17	1140,0	766,0	304.100	670.414	2980,2

### Major features:

- ↑ Excellent shock mitigation
- ↑ Good abrasion and wear resistance in wet conditions
- ↑ Good UV resistance
- ↑ Flexible, Non kinking and non rotating

Specific Gravity: 1,14

Melting Point: 260°C

Elongation at % of BS:  
25% .... 11,0%  
50% .... 18,0%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines
- ↑ Shock lines





# 8 STRAND



The smoothness and high tenacity characteristics of polyester are empowered by a firm 8 strands plaited construction enhancing its excellent abrasion and high heat resistance, creating a durable high tenacity rope with low elongation and excellent fatigue life.

## POLYESTER

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	59,4	39,9	11.850	26.124	116,1
30	1-1/4	3-3/4	68,2	45,8	13.450	29.652	131,8
32	1-5/16	4	77,8	52,3	15.300	33.730	149,9
34	1-3/8	4-1/4	88,0	59,1	17.250	38.029	169,1
36	1-1/2	4-1/2	98,2	66,0	19.200	42.328	188,2
40	1-5/8	5	121,0	81,3	23.450	51.698	229,8
44	1-3/4	5-1/2	147,0	98,8	28.150	62.059	275,9
48	2	6	175,0	117,6	33.250	73.302	325,9
52	2-1/8	6-1/2	205,0	137,8	38.750	85.428	379,8
56	2-1/4	7	238,0	159,9	44.600	98.325	437,1
60	2-1/2	7-1/2	273,0	183,4	51.000	112.434	499,8
64	2-5/8	8	311,0	209,0	57.750	127.315	566,0
72	3	9	393,5	264,4	72.250	159.281	708,1
80	3-1/4	10	485,0	325,9	88.450	194.996	866,8
88	3-5/8	11	586,0	393,8	106.100	233.907	1039,8
96	4	12	698,0	469,0	125.500	276.675	1229,9
104	4-1/4	13	819,0	550,3	146.000	321.869	1430,8
112	4-5/8	14	949,0	637,7	168.350	371.142	1649,8
120	5	15	1091,0	733,1	191.850	422.950	1880,1
128	5-1/4	16	1242,0	834,6	217.350	479.167	2130,0
136	5-1/2	17	1402,0	942,1	243.900	537.698	2390,2

### Major features:

- ↑ High heat and abrasion resistance
- ↑ High strength and low working elongation
- ↑ Excellent UV resistance
- ↑ Flexible, Non kinking and non rotating

Specific Gravity: 1,38

Melting Point: 265°C

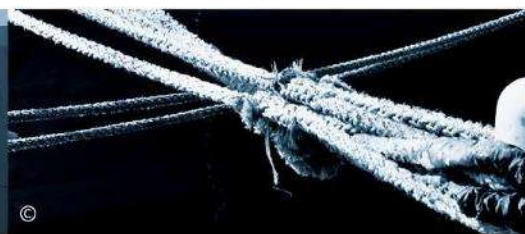
Elongation at % of BS:

25% .... 5,0%

50% .... 8,0%

### Main applications:

- ↑ Mooring lines
- ↑ Mooring pendants
- ↑ Tug and towing lines



Made from high tenacity polyethylene, this polyethylene monofilaments plaited rope is light weighted, with good abrasion resistance and long wearing life. With fine resistance against UV lights and a soft touch, this floating line has good elongation and high creep.

## PE MONO



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	39,0	26,2	7.350	16.204	72,0
30	1-1/4	3-3/4	46,0	30,9	8.650	19.070	84,8
32	1-5/16	4	52,5	35,3	9.800	21.605	96,0
34	1-3/8	4-1/4	59,3	39,8	11.050	24.361	108,3
36	1-1/2	4-1/2	66,0	44,3	12.300	27.116	120,5
40	1-5/8	5	78,5	52,7	14.600	32.187	143,1
44	1-3/4	5-1/2	95,0	63,8	17.900	39.462	175,4
48	2	6	115,0	77,3	20.700	45.635	202,9
52	2-1/8	6-1/2	135,0	90,7	24.200	53.351	237,2
56	2-1/4	7	157,0	105,5	27.000	59.524	264,6
60	2-1/2	7-1/2	180,0	121,0	30.700	67.681	300,9
64	2-5/8	8	205,0	137,8	34.800	76.720	341,0
72	3	9	259,0	174,0	43.550	96.010	426,8
80	3-1/4	10	321,0	215,7	53.050	116.953	519,9
88	3-5/8	11	388,0	260,7	63.650	140.322	623,8
96	4	12	461,0	309,8	74.900	165.123	734,0
104	4-1/4	13	542,0	364,2	85.600	188.713	838,9
112	4-5/8	14	630,0	423,3	98.750	217.703	967,8
120	5	15	719,0	483,1	111.800	246.473	1095,6
128	5-1/4	16	818,0	549,7	124.000	273.369	1215,2
136	5-1/2	17	929,0	624,2	138.600	305.556	1358,3

### Major features:

- ↑ Good abrasion and wear resistance
- ↑ Good UV resistance
- ↑ Good elongation and high creep
- ↑ Floating, no water absorption
- ↑ Flexible, Non kinking and non rotating

Specific Gravity: 0,95

Melting Point: 150°C

Elongation at % of BS:

25% .... 10,0%

50% .... 16,0%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines
- ↑ Tug and barge tie-up lines



Made from high tenacity polypropylene monofilaments yarns, its 8 strands plaited construction results on a high strength and light weighted rope with good abrasion resistance and good elongation being a good compromise on a price/quality ratio.

## PP MONO



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	34,0	22,8	10.700	23.589	104,9
30	1-1/4	3-3/4	40,5	27,2	12.150	26.786	119,1
32	1-5/16	4	46,0	30,9	13.700	30.203	134,3
34	1-3/8	4-1/4	52,3	35,1	15.350	33.840	150,4
36	1-1/2	4-1/2	58,5	39,3	17.050	37.588	167,1
40	1-5/8	5	72,0	48,4	20.800	45.855	203,8
44	1-3/4	5-1/2	88,0	59,1	24.800	54.674	243,0
48	2	6	104,0	69,9	29.200	64.374	286,2
52	2-1/8	6-1/2	122,0	82,0	33.900	74.735	332,2
56	2-1/4	7	142,0	95,4	38.900	85.758	381,2
60	2-1/2	7-1/2	163,0	109,5	44.200	97.443	433,2
64	2-5/8	8	185,0	124,3	49.800	109.788	488,0
72	3	9	234,0	157,2	62.050	136.795	608,1
80	3-1/4	10	290,0	194,9	75.500	166.446	739,9
88	3-5/8	11	351,0	235,9	90.500	199.515	886,9
96	4	12	417,0	280,2	106.100	233.907	1039,8
104	4-1/4	13	490,0	329,3	123.450	272.156	1209,8
112	4-5/8	14	570,0	383,0	141.850	312.720	1390,1
120	5	15	650,0	436,8	161.200	355.379	1579,8
128	5-1/4	16	740,0	497,2	181.650	400.463	1780,2
136	5-1/2	17	840,0	564,4	204.100	449.956	2000,2

### Major features:

- ↑ Light weight
- ↑ Good elongation
- ↑ Good abrasion resistance
- ↑ Flexible, Non kinking and non rotating

Specific Gravity: 0,91

Melting Point: 165°C

Elongation at % of BS:

25% .... 6,0%

50% .... 8,0%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines



A film plaited rope that has a high level of strength and over twice the service life compared to other standard 8 strands plaited polypropylene ropes. Its flexible construction assures a good and safe handling.

## PP FILM



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
28	1-1/8	3-1/2	34,0	22,8	10.700	23.589	104,9
30	1-1/4	3-3/4	40,5	27,2	12.150	26.786	119,1
32	1-5/16	4	46,0	30,9	13.650	30.093	133,8
34	1-3/8	4-1/4	52,3	35,1	15.350	33.840	150,4
36	1-1/2	4-1/2	58,5	39,3	17.050	37.588	167,1
40	1-5/8	5	72,0	48,4	20.800	45.855	203,8
44	1-3/4	5-1/2	88,0	59,1	24.800	54.674	243,0
48	2	6	104,0	69,9	29.200	64.374	286,2
52	2-1/8	6-1/2	122,0	82,0	33.900	74.735	332,2
56	2-1/4	7	142,0	95,4	38.900	85.758	381,2
60	2-1/2	7-1/2	163,0	109,5	44.200	97.443	433,2
64	2-5/8	8	185,0	124,3	49.800	109.788	488,0
72	3	9	234,0	157,2	62.000	136.684	607,6
80	3-1/4	10	290,0	194,9	75.500	166.446	739,9
88	3-5/8	11	351,0	235,9	90.500	199.515	886,9
96	4	12	417,0	280,2	106.100	233.907	1039,8
104	4-1/4	13	490,0	329,3	123.450	272.156	1209,8
112	4-5/8	14	570,0	383,0	141.850	312.720	1390,1
120	5	15	650,0	436,8	161.200	355.379	1579,8
128	5-1/4	16	740,0	497,2	181.650	400.463	1780,2
136	5-1/2	17	840,0	564,4	204.100	449.956	2000,2

### Major features:

- ↑ Light weight
- ↑ Good elongation
- ↑ Good wear resistance
- ↑ Flexible, Non kinking and non rotating

Specific Gravity: 0,91

Melting Point: 165°C

Elongation at % of BS:

25% .... 6,0%

50% .... 8,0%

### Main applications:

- ↑ Mooring lines
- ↑ Towing lines





When additional elasticity to mooring ropes is required we recommend the use of mooring tails. Tails can provide more elasticity working as shock absorbers which allows the ship to respond more favourably when subjected to hard conditions such as strong tides or strong winds.

## MOORING TAILS

### Major features:

- ↑ Excellent shock absorbers
- ↑ Excellent elongation
- ↑ Flexible, Non kinking and non rotating

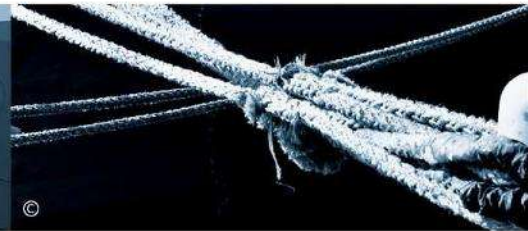
Diameter		Size Circ.	Weight/Un		Breaking Load		
mm	inches	inches	Kg/Un	lbs/Un	kgf	lbf	kN
56	2-1/4	7	33	72	56.100	123.677	549,8
64	2-5/8	8	43	94	72.350	159.502	709,0
72	3	9	54	120	90.500	199.515	886,9
80	3-1/4	10	67	148	110.200	242.945	1080,0
88	3-5/8	11	81	179	132.650	292.438	1300,0
96	4	12	97	213	156.100	344.136	1529,8

Standard length is 11 m [36 ft] with soft eyes both ends; 2 meters (6 ft) one end and 1 meter (3 ft) the other end.

Specific Gravity: 1,14  
 Melting Point: 260°C  
 Elongation at % of BS:  
     25% .... 11,0%  
     50% .... 18,0%

### Main applications:

- ↑ Mooring tails







Movline plus ropes are made from a high tenacity composite fiber extruded on a custom-built extrusion process. This extremely strong bi-polymer and its balanced twisted construction, result on a rope with good wear resistance and exceptional gripping capabilities that are enhanced by the outer fuzzy surface developed in use, also protecting the inner fibers against abrasion.



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	26,0	17,5	9.800	21.605	96,0
26	1-1/32	3-1/4	30,6	20,6	11.500	25.353	112,7
28	1-1/8	3	35,5	23,9	13.350	29.431	130,8
30	1-1/4	3-3/4	41,1	27,6	15.450	34.061	151,4
32	1-5/16	4	46,0	30,9	17.300	38.139	169,5
34	1-3/8	4-1/4	54,5	36,6	20.500	45.194	200,9
36	1-1/2	4-1/2	58,0	39,0	21.800	48.060	213,6
38	1-9/16	4-3/4	68,0	45,7	25.600	56.437	250,9
40	1-5/8	5	71,5	48,0	26.900	59.303	263,6
44	1-3/4	5-1/2	88,5	59,5	32.650	71.980	320,0
48	2	6	104,0	69,9	37.800	83.333	370,4
52	2-1/8	6-1/2	122,0	82,0	42.300	93.254	414,5
56	2-1/4	7	142,0	95,4	47.900	105.600	469,4
60	2-1/2	7-1/2	163,0	109,5	54.000	119.048	529,2
64	2-5/8	8	185,0	124,3	60.600	133.598	593,9
68	2-3/4	8-1/2	215,0	144,5	69.850	153.990	684,5
72	3	9	234,0	157,2	75.550	166.556	740,4
80	3-1/4	10	290,0	194,9	93.000	205.026	911,4
90	3-9/16	11-1/8	375,0	252,0	119.150	262.676	1167,7

**Major features:**

- ↑ High abrasion and wear resistance
- ↑ High strength floating line
- ↑ No water absorption
- ↑ Good UV resistance

Specific Gravity: 0,94

Melting Point: 165°C

Elongation at % of BS:

25% .... 6,0%

50% .... 11,5%

**Main applications:**

- ↑ Tie up and Mooring lines
- ↑ General deck lines
- ↑ Towing lines



Deckline ropes are a special economy line that combines the abrasion resistance and tenacity of our Movline Plus bi-polymer fiber. This cost effective floating rope has good wear and abrasion resistance given by the outer Movline cover and higher breaking resistance when compared to other traditional PP ropes.



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	26,0	17,5	8.600	18.959	84,3
26	1-1/32	3-1/4	30,6	20,6	10.100	22.266	99,0
28	1-1/8	3	35,5	23,9	11.750	25.904	115,2
30	1-1/4	3-3/4	41,1	27,6	13.450	29.652	131,8
32	1-5/16	4	46,0	30,9	15.050	33.179	147,5
34	1-3/8	4-1/4	54,5	36,6	17.850	39.352	174,9
36	1-1/2	4-1/2	58,0	39,0	19.000	41.887	186,2
38	1-9/16	4-3/4	68,0	45,7	22.250	49.052	218,1
40	1-5/8	5	71,5	48,0	23.400	51.587	229,3
44	1-3/4	5-1/2	88,5	59,5	29.650	65.366	290,6
48	2	6	104,0	69,9	34.350	75.728	336,6
52	2-1/8	6-1/2	122,0	82,0	38.500	84.877	377,3
56	2-1/4	7	142,0	95,4	43.600	96.120	427,3
60	2-1/2	7-1/2	163,0	109,5	49.200	108.466	482,2
64	2-5/8	8	185,0	124,3	55.200	121.693	541,0
68	2-3/4	8-1/2	215,0	144,5	63.600	140.212	623,3
72	3	9	234,0	157,2	68.800	151.675	674,2
80	3-1/4	10	290,0	194,9	84.650	186.618	829,6
90	3-9/16	11-1/8	375,0	252,0	108.400	238.977	1062,3

**Major features:**

- ↑ Cost effective compared to traditional PP ropes
- ↑ High abrasion resistance
- ↑ Good breaking strength
- ↑ Excellent UV resistance

Specific Gravity: 0,93

Melting Point: 165°C

Elongation at % of BS:

25% .... 6,0%

50% .... 11,5%

**Main applications:**

- ↑ General deck lines
- ↑ Tie-up lines



## 3/4 STRAND

### COMBO

A blended rope that combines the best properties of Polyester fiber with our Movline bi-polymer fiber in a unique twisted balanced construction where every single Movline yarn is covered with Polyester, giving it an exceptional wearing resistance and strength with significantly less handling weight than an all polyester ropes.



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	35,2	23,6	9.900	21.825	97,0
26	1-1/32	3-1/4	41,2	27,7	11.650	25.683	114,2
28	1-1/8	3	47,9	32,2	13.500	29.762	132,3
30	1-1/4	3-3/4	54,9	36,9	15.350	33.840	150,4
32	1-5/16	4	62,6	42,0	17.500	38.580	171,5
34	1-3/8	4-1/4	72,8	48,9	20.350	44.863	199,4
36	1-1/2	4-1/2	79,1	53,1	21.900	48.280	214,6
38	1-9/16	4-3/4	90,8	61,0	25.150	55.445	246,5
40	1-5/8	5	97,4	65,5	27.000	59.524	264,6
44	1-3/4	5-1/2	118,6	79,7	35.350	77.932	346,4
48	2	6	140,9	94,7	41.500	91.490	406,7
52	2-1/8	6-1/2	165,1	110,9	46.550	102.623	456,2
56	2-1/4	7	191,8	128,9	52.800	116.402	517,4
60	2-1/2	7-1/2	220,1	147,9	59.850	131.944	586,5
64	2-5/8	8	250,4	168,3	67.250	148.258	659,1
68	2-3/4	8-1/2	287,0	192,9	76.450	168.541	749,2
72	3	9	258,9	174,0	68.600	151.235	672,3
80	3-1/4	10	391,1	262,8	102.900	226.852	1008,4
90	3-9/16	11-1/8	505,5	339,7	131.750	290.454	1291,2

#### Major features:

- ↑ Exceptional abrasion and wear resistance
- ↑ 18-20 % lighter than an all polyester constructions
- ↑ Less water absorption than an all polyester ropes
- ↑ Smooth balanced construction

Specific Gravity: 1,16

Melting Point: 165°C / 265°C

Elongation at % of BS:

25% .... 4,0%

50% .... 7,0%

#### Main applications:

- ↑ Barge working lines
- ↑ Tie-up lines
- ↑ General deck lines



Polyamide ropes provides high breaking strengths while its high elongation works as an excellent energy absorber. Its very good abrasion and heat resistance are enhanced by a twisted balanced construction, even in wet conditions, while the quality of fibers insure a perfect twist and lay tension reducing natural shrinkage in use.

### POLYAMIDE



Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	35,5	23,9	11.450	25.243	112,2
26	1-1/32	3-1/4	42,0	28,2	13.150	28.990	128,9
28	1-1/8	3	48,5	32,6	15.200	33.510	149,0
30	1-1/4	3-3/4	55,5	37,3	17.250	38.029	169,1
32	1-5/16	4	63,0	42,3	19.600	43.210	192,1
34	1-3/8	4-1/4	73,6	49,5	22.050	48.611	216,1
36	1-1/2	4-1/2	80,0	53,8	24.500	54.012	240,1
38	1-9/16	4-3/4	91,8	61,7	27.250	60.075	267,1
40	1-5/8	5	99,0	66,5	30.000	66.138	294,0
44	1-3/4	5-1/2	120,0	80,6	35.800	78.924	350,8
48	2	6	142,0	95,4	42.050	92.703	412,1
52	2-1/8	6-1/2	166,0	111,5	48.900	107.804	479,2
56	2-1/4	7	193,0	129,7	56.100	123.677	549,8
60	2-1/2	7-1/2	221,0	148,5	64.000	141.093	627,2
64	2-5/8	8	252,0	169,3	72.350	159.502	709,0
68	2-3/4	8-1/2	290,3	195,1	81.450	179.563	798,2
72	3	9	319,0	214,4	90.500	199.515	886,9
80	3-1/4	10	394,0	264,8	110.200	242.945	1080,0
90	3-9/16	11-1/8	512,2	344,2	127.150	280.313	1246,1

#### Major features:

- ↑ Good abrasion and wear resistance even in wet conditions
- ↑ Excellent shock mitigation
- ↑ Good UV resistance
- ↑ Flexible and smooth construction

Specific Gravity: 1,14

Melting Point: 260°C

Elongation at % of BS:

25% .... 12,5%

50% .... 20,0%

#### Main applications:

- ↑ Mooring lines
- ↑ Anchor lines
- ↑ Shock lines
- ↑ Deck lines





The smoothness and high tenacity characteristics of polyester are empowered by a twisted balanced construction enhancing its excellent abrasion and high heat resistance, creating a durable high tenacity rope with low elongation and excellent life fatigue.

## POLYESTER

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	43,7	29,4	8.800	19.400	86,2
26	1-1/32	3-1/4	51,2	34,4	10.300	22.707	100,9
28	1-1/8	3	59,4	39,9	11.850	26.124	116,1
30	1-1/4	3-3/4	68,2	45,8	13.450	29.652	131,8
32	1-5/16	4	77,8	52,3	15.300	33.730	149,9
34	1-3/8	4-1/4	90,4	60,7	17.250	38.029	169,1
36	1-1/2	4-1/2	98,2	66,0	19.200	42.328	188,2
38	1-9/16	4-3/4	112,8	75,8	21.350	47.068	209,2
40	1-5/8	5	121,0	81,3	23.450	51.698	229,8
44	1-3/4	5-1/2	147,0	98,8	28.150	62.059	275,9
48	2	6	175,0	117,6	33.250	73.302	325,9
52	2-1/8	6-1/2	205,0	137,8	38.800	85.538	380,2
56	2-1/4	7	238,0	159,9	44.600	98.325	437,1
60	2-1/2	7-1/2	273,0	183,4	51.000	112.434	499,8
64	2-5/8	8	311,0	209,0	57.800	127.425	566,4
68	2-3/4	8-1/2	356,8	239,8	65.000	143.298	637,0
72	3	9	393,5	264,4	72.250	159.281	708,1
80	3-1/4	10	485,0	325,9	88.450	194.996	866,8
90	3-9/16	11-1/8	627,0	421,3	110.000	242.504	1078,0

### Major features:

- ↑ High heat and abrasion resistance
- ↑ High strength and low working elongation
- ↑ Excellent UV resistance
- ↑ Smooth and flexible

Specific Gravity: 1,38

Melting Point: 265°C

Elongation at % of BS:

25% .... 5,0%

50% .... 8,0%

### Main applications:

- ↑ Tie-up and Mooring lines
- ↑ Anchor Lines
- ↑ Deck lines



Made from high tenacity polyethylene, this polyethylene monofilaments twisted rope is light weighted, with good abrasion resistance and long wearing life. With fine resistance against UV lights, has good elongation and high creep.

## PE MONO

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	29,5	19,8	6.000	13.228	58,8
26	1-1/32	3-1/4	32,8	22,0	7.000	15.432	68,6
28	1-1/8	3	39,3	26,4	8.100	17.857	79,4
30	1-1/4	3-3/4	46,0	30,9	9.200	20.282	90,2
32	1-5/16	4	52,5	35,3	10.400	22.928	101,9
34	1-3/8	4-1/4	61,0	41,0	11.750	25.904	115,2
36	1-1/2	4-1/2	66,0	44,3	13.000	28.660	127,4
38	1-9/16	4-3/4	66,0	44,3	14.550	32.077	142,6
40	1-5/8	5	78,5	52,7	16.000	35.273	156,8
44	1-3/4	5-1/2	95,0	63,8	19.200	42.328	188,2
48	2	6	115,0	77,3	22.650	49.934	222,0
52	2-1/8	6-1/2	135,0	90,7	26.450	58.311	259,2
56	2-1/4	7	157,0	105,5	30.500	67.240	298,9
60	2-1/2	7-1/2	180,0	121,0	34.800	76.720	341,0
64	2-5/8	8	205,0	137,8	39.400	86.861	386,1
68	2-3/4	8-1/2	240,6	161,7	44.400	97.884	435,1
72	3	9	259,0	174,0	49.400	108.907	484,1
80	3-1/4	10	321,0	215,7	60.400	133.157	591,9
90	3-9/16	11-1/8	415,0	278,9	68.600	151.235	672,3

### Major features:

- ↑ Good abrasion and wear resistance
- ↑ Good UV resistance
- ↑ Good elongation and high creep
- ↑ Floating, no water absorption

Specific Gravity: 0,95

Melting Point: 150°C

Elongation at % of BS:

25% .... 10,0%

50% .... 16,0%

### Main applications:

- ↑ Barge tie-up lines
- ↑ Tug lines
- ↑ Deck lines



## 3/4 STRAND



A twisted rope made from high tenacity polypropylene monofilaments yarns, its balanced construction results in a high strength and light weighted rope with good abrasion resistance and good elongation being a good compromise on a price/quality ratio.

### PP MONO

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	26,0	17,5	8.050	17.747	78,9
26	1-1/32	3-1/4	30,5	20,5	9.350	20.613	91,6
28	1-1/8	3	35,5	23,9	10.700	23.589	104,9
30	1-1/4	3-3/4	40,5	27,2	12.150	26.786	119,1
32	1-5/16	4	46,0	30,9	13.700	30.203	134,3
34	1-3/8	4-1/4	53,7	36,1	15.350	33.840	150,4
36	1-1/2	4-1/2	58,5	39,3	17.050	37.588	167,1
38	1-9/16	4-3/4	67,0	45,0	19.000	41.887	186,2
40	1-5/8	5	72,0	48,4	20.800	45.855	203,8
44	1-3/4	5-1/2	88,0	59,1	24.800	54.674	243,0
48	2	6	104,0	69,9	29.200	64.374	286,2
52	2-1/8	6-1/2	122,0	82,0	33.900	74.735	332,2
56	2-1/4	7	142,0	95,4	38.900	85.758	381,2
60	2-1/2	7-1/2	163,0	109,5	44.200	97.443	433,2
64	2-5/8	8	185,0	124,3	49.800	109.788	488,0
68	2-3/4	8-1/2	211,9	142,4	55.900	123.236	547,8
72	3	9	234,0	157,2	62.050	136.795	608,1
80	3-1/4	10	290,0	194,9	75.500	166.446	739,9
90	3-9/16	11-1/8	375,0	252,0	91.100	200.838	892,8

#### Major features:

- ↑ Light weight
- ↑ Good elongation
- ↑ Good abrasion resistance

Specific Gravity: 0,91

Melting Point: 165°C

Elongation at % of BS:

25% .... 6,5%

50% .... 12,0%

#### Main applications:

- ↑ Tie-up lines
- ↑ Deck general lines



An economic PP film twisted rope that has a high level of strength and excellent service life compared to other standard polypropylene ropes.

### PP FILM

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	26,0	17,5	8.050	17.747	78,9
26	1-1/32	3-1/4	30,5	20,5	9.350	20.613	91,6
28	1-1/8	3	35,5	23,9	10.700	23.589	104,9
30	1-1/4	3-3/4	40,5	27,2	12.150	26.786	119,1
32	1-5/16	4	46,0	30,9	13.700	30.203	134,3
34	1-3/8	4-1/4	53,7	36,1	15.350	33.840	150,4
36	1-1/2	4-1/2	58,5	39,3	17.050	37.588	167,1
38	1-9/16	4-3/4	67,0	45,0	19.000	41.887	186,2
40	1-5/8	5	72,0	48,4	20.800	45.855	203,8
44	1-3/4	5-1/2	88,0	59,1	24.800	54.674	243,0
48	2	6	104,0	69,9	29.200	64.374	286,2
52	2-1/8	6-1/2	122,0	82,0	33.900	74.735	332,2
56	2-1/4	7	142,0	95,4	38.900	85.758	381,2
60	2-1/2	7-1/2	163,0	109,5	44.200	97.443	433,2
64	2-5/8	8	185,0	124,3	49.800	109.788	488,0
68	2-3/4	8-1/2	211,9	142,4	55.900	123.236	547,8
72	3	9	234,0	157,2	62.050	136.795	608,1
80	3-1/4	10	290,0	194,9	75.500	166.446	739,9
90	3-9/16	11-1/8	375,0	252,0	91.100	200.838	892,8

#### Major features:

- ↑ Economic
- ↑ Light weight
- ↑ Good wear resistance

Specific Gravity: 0,91

Melting Point: 165°C

Elongation at % of BS:

25% .... 6,5%

50% .... 12,0%

#### Main applications:

- ↑ Tie-up lines
- ↑ Deck general lines



# 3/4 STRAND



Traditional ropes made from a blend of selected natural fibers, with good abrasion resistance and low elongation, are bio degradable and non-polluting, and are excellent for classic old fashion ships. A special colour treatment can be applied upon request to match natural colour of manila fiber.

## SISAL

Diameter		Size Circ.	Weight		Breaking Load		
mm	inches	inches	Kg/100m	lbs/100ft	kgf	lbf	kN
24	1	3	40,0	26,9	4.070	8.973	39,9
26	1-1/32	3-1/4	47,0	31,6	4.730	10.428	46,4
28	1-1/8	3	53,0	35,6	5.320	11.728	52,1
30	1-1/4	3-3/4	62,5	42,0	6.100	13.448	59,8
32	1-5/16	4	70,0	47,0	6.900	15.212	67,6
34	1-3/8	4-1/4	82,9	55,7	7.800	17.196	76,4
36	1-1/2	4-1/2	89,0	59,8	8.700	19.180	85,3
38	1-9/16	4-3/4	103,4	69,5	10.500	23.148	102,9
40	1-5/8	5	110,0	73,9	12.750	28.108	125,0
44	1-3/4	5-1/2	134,0	90,0	14.800	32.628	145,0
48	2	6	158,0	106,2	17.350	38.250	170,0
52	2-1/8	6-1/2	187,0	125,7	19.900	43.871	195,0
56	2-1/4	7	215,0	144,5	22.600	49.824	221,5
60	2-1/2	7-1/2	248,0	166,6	25.700	56.658	251,9
64	2-5/8	8	288,0	193,5	28.550	62.941	279,8
68	2-3/4	8-1/2	318,0	213,7	32.800	72.310	321,4
72	3	9	362,0	243,2	35.000	77.160	343,0
80	3-1/4	10	440,0	295,7	38.800	85.538	380,2
90	3-9/16	11-1/8	571,0	383,7	48.500	106.922	475,3

Major features:

- ↑ Low elongation
- ↑ Bio degradable, non polluting
- ↑ Do not slip
- ↑ Good UV resistance

Specific Gravity: 1,38

Melting Point: 165°C

Elongation at % of BS:

25% .... 4,0%

50% .... 7,0%

Major features:

- ↑ Classic Vessels
- ↑ Tie-up lines





# GENERAL INFORMATION

ROPE CONSTRUCTION  
RAW MATERIALS  
CARE & USE





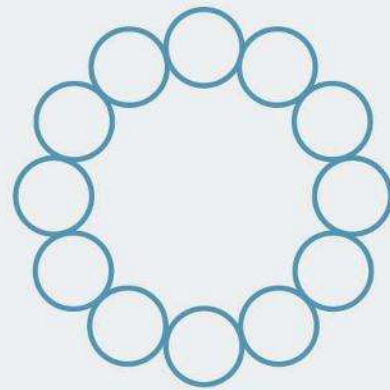
## CONSTRUCTION

Rope construction plays an important role in resistance to wear and abrasion. Braided ropes have a, basically, round, smooth construction that tends to flatten out some-what on a bearing surface. This distributes the wear over a much greater area, as opposed to the crowns of a three-strand.

All ropes should be protected against sharp and abrasive surfaces. Wire ropes tend to score and gouge chocks and bitts creating cutting edges that can damage synthetic ropes. Weld beads on repaired capstands, fairleads, etc. are equally damaging unless dressed down smoothly.

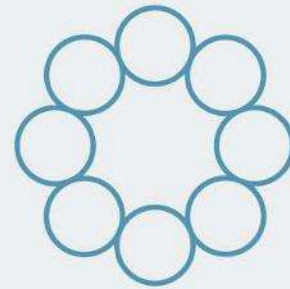
## 12 STRAND BRAIDED

12 strands ropes are constructed of left and right-hand laid strands to give a torque-free balanced construction and its round shape provides excellent abrasion resistance due to a greater surface of contact and may offer higher breaking strengths over conventional constructions. They are easily spliceable and provide a good rope structure for mooring lines.



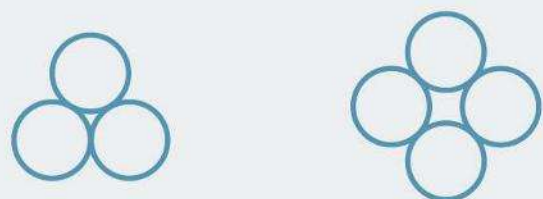
## 8 STRAND BRAIDED

8 strands ropes also called square braided or plaited are constructed of left and right-hand laid strands to give a torque-free rope. They are easily spliceable and provide an excellent rope structure for mooring lines.



## 3 OR 4 STRAND TWISTED

3 or 4 strands is the oldest and simplest rope construction, consisting of 3 or 4 twisted strands laid together. Twisted constructions may retain some torque, and therefore tend to kink up, and to rotate under load. Twisted ropes are hard wearing and easily spliced.





## RAW MATERIALS

Different fibres, different characteristics, different results

FIBRE	POLYAMIDE (PA) 6 unid 6,6	PES (POLYESTER)	PP (POLYPROPYLENE)	PP (POLYPROPYLENE) MULTIFILAMENT	PE (POLYETHYLENE)	HMWPE	MIXED (POLYOLEFIN)	SISAL
BRANDNAME	Perlon Nylon Nylsuisse Enkalon	Diolen Trevira Dacron Ersuisse	Leolene Arova	Hostalen Softlene Leolene	Lupolen Vestalen Wetalen	Dyneema Spectra		
TENACITY (GF/DENIER)	7,5 to 10,5	7,5 to 10,5	6,0 to 6,5	6,0 to 6,5  7,3 to 9,5	5,5 to 9,0	32,8 to 39,8	6,5 to 8,5	2,0 to 2,5
SPECIFIC GRAVITY KG/DM <sup>3</sup>	1,14	1,38	0,91	0,91	0,96	0,96		
ELONGATION AT BREAK%	14 to 28	14 to 18	12 to 18	20 to 24  16 to 20	16 to 24	3 to 3,5	12 to 18	3 to 12
CREEP RESISTANCE	Moderate	Low	High	High	High	Moderate	High	Very low
SHOCK LOAD ABSORPTION	Excellent	Very good	Very good	Very good	Fair	Excellent	Good	Poor
MELTING POINT APP. °C	215 [PA] 255 [NYLON]	260	170	170	150	150	165	
WATER ABSORPTION %	Yes	Yes	No	No	No	No	No	Yes
WET STRENGTH COMPARED TO DRY STRENGTH	85-90%	100%	100%	100%	105%	100%	100%	Up to 120%
UV RESISTANCE	Good	Excellent	Fair	Fair	Fair	Excellent	Good	Good
RESISTANCE TO ABRASION	Very good	Very good	Fair	Fair	Fair	Good	Good	Fair

Table Based on the information provided by Cordage Institute Technical Service

**EXTENSION AND ELASTICITY**

Rope extension and elasticity are important features because they will establish rope behaviour in terms of peak loads. Load-extension characteristics of Synthetic fibre ropes are non-linear and time dependent.

Several different components complete overall extension of a rope:

**VISCOELASTIC EXTENSION**

Viscoelastic extension is only recoverable some time after releasing the load. The performance of ropes subjected to occasional high loads will be significantly influenced by this viscoelastic component.

**ELASTIC EXTENSION**

Elastic extension is the immediately recoverable extension upon the release of the load and in a continuously working environment dominates rope behaviour.

**PERMANENT EXTENSION**

Permanent extension is non-recoverable. It occurs when a new rope is first used or when subject to an unusually high load and is the result of the lay down of individual fibre components to their preferred positions. Continuous loading of some ropes can also lead to permanent extension.



## STORAGE

Ropes should be stored on a dry and clean place, out of direct sunlight and any heat sources. When possible it should be stored off the ground, away from metal walls or steam pipes, to allow adequate ventilation and away from chemicals of all types.

Never store rope on concrete or dirty floors, or drag over rough ground - dirt or sand picked up by the rope may cause cuttings on inside fibres during work. In case of long term storage, ropes should be cleaned with fresh water to reduce salt crystals that may affect its life and efficiency.

## HANDLING

When a rope is supplied in a coil it should always be uncoiled from the inside so that the first turn comes off from the bottom in a counter-clockwise direction. When supplied on reels, it must be allowed to freely rotate so that the rope can be drawn off the top layer. Never take rope from a reel lying on its side.

A wrong coil or uncoil on a twisted rope will provoke kinking and hockling. Three and four strand ropes should be coiled in a clockwise direction (in lay's direction) and uncoiled in a counter-clockwise direction to avoid hockling and kinking.

Braided ropes can not be kinked or hockled, however, twist can be produced into ropes during service. Excessive twist may cause an imbalance between the right and left hand strands and should be removed as soon as possible by counter-rotating the rope when it is relaxed. The best method for storing both braided and twisted ropes is in a eight figure fashion.

## ROPE SAFETY

Never stand in line with a rope under tension. If a rope fails it can draw back with sufficient force to cause serious injuries. Always ensure correct safety factors are being used.

## ROPE INSPECTION

Avoid using ropes that show signs of aging and wear. Rope should be inspected regularly for evidence of chemical attack, kinking, and surface abrasion including major yarn or strand cuts and heat fusion indicated by glazed or heavy fuzzed areas.

Braided ropes should be examined along their entire length for areas of stiffening or inconsistent diameter, which can be a sign of internal damage or core failure due to overloading or severe shock loads. Both outer and inner rope fibers contribute to the strength of the rope and when either is worn, rope is naturally weakened.

No type of visual inspection is a guarantee to an accurate determination of residual strength. When the fibers show wear in any given area, if limited to one small section the damaged area may be cut out and re-spliced, otherwise the rope should be downgraded or replaced.



## SPLICING AND KNOTS

The use of knots can reduce rope strength over fifty percent so whenever possible splices should be used instead. Variations up to twenty five percent can occur with poor splicing or very short length. According to each situation, always take into consideration the corresponding reduction to the rope strength adjusting working loads accordingly. When splices are used, always use recommended splicing procedures of the manufacturer.

The length of an eye in a rope should be a minimum of three times, and preferably five times, the diameter of the item around which it is to be used. This will ensure that the angle between the two legs of the eye will not cause a tearing action to the throat of the eye. For instance if the eye of a mooring line is passing around a 600mm diameter bollard then the eye should be a minimum of 1.8 metres.

## BENDING RADIUS

Sharp bends around any piece of equipment should be avoided as, under load, it decreases rope strength substantially and may cause premature damage and failure. The diameter on fixed pin terminations should be at least 3 times the rope diameter and on rotating sheave blocks, it should be 10 times the rope diameter for twisted ropes and 8 times the rope diameter for braided ropes.

## WORKING LOADS

Working loads are the loads that a rope is subjected to when in activity. They are normally expressed as a percentage of new rope strength and should not exceed 20% of published strengths (many industries are subject to special working loads regulations that supersede manufacturer's recommendation).

When sever overloaded or shock loads takes place, rope can suffer damages and consequently strength losses without any visible indication, which may weaken the rope causing it to break on next use, even if used under normal working loads. Sharp bends should be avoided as, under load, it decreases rope strength substantially and can cause premature failure.



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