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Lanex
You can be sure

Marine Ropes

THE TRADITION OF ROPE MAKING AT BOLATICE DATES BACK TO 1949.

The gradual development of braided and twisted ropes and cords being used in marine and fishing industry initially, led to transition from natural materials to progressive synthetic fibres with excellent strength and resistance.

CONTENT

LANEX PRODUCES ROPES ESPECIALLY FOR:

- SHIP BUILDING INDUSTRY
- FISHING INDUSTRY
- TECHNICAL TEXTILE INDUSTRY (NETS)
- MECHANICAL ENGINEERING
- BUILDING AND CONSTRUCTION INDUSTRY
- AGRICULTURE
- SPORT
- HOBBY AND LEISURE TIME

IN-HOUSE EXTRUSION LINES

Because we produce the basic materials in house – polypropylene tapes, high tenacity fibres MULTITEX and POLYS shaped monofilament we can be very flexible in meeting the needs of our customers, and in developing and improving our products, increasing their parameters, and maintaining a high level of quality control.

CERTIFIED QUALITY

Our production is certified by renowned institutions, including Germanischer Lloyd and Rossijskij Morskoj Registr. Testing takes place in modern, certified in-house testing rooms. LANEX is also certified according to ISO 9001.

MEG-4

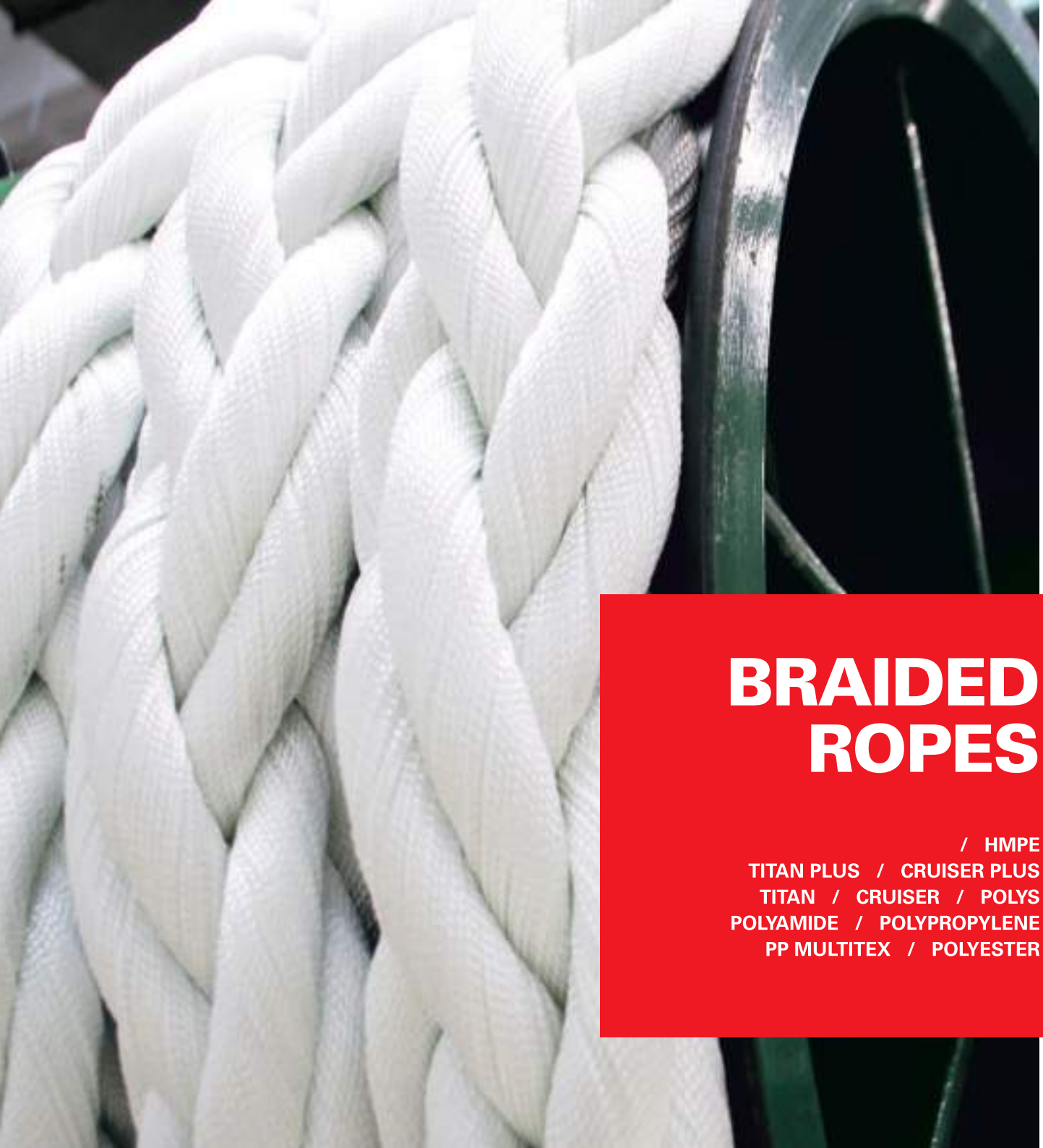
LLOYD'S REGISTER

DNV GL

ROSSIJSKIJ MORSKOJ REGISTR

ČSN EN ISO 9001:2016

ČOS 051672 (AQAP 2110)



BRAIDED ROPES

/ HMPE
TITAN PLUS / CRUISER PLUS
TITAN / CRUISER / POLYS
POLYAMIDE / POLYPROPYLENE
PP MULTITEX / POLYESTER

HMPE

High Modulus Polyethylene rope is one of the strongest, most durable and innovative ropes on the market today. The HMPE ropes are impregnated with durable coating to reduce abrasion and extend the service life. The extraordinary features and extreme strength of HMPE ropes is a reason for using them as frequent substitute to steel wire ropes. The HMPE ropes go through a special heat and UV resistance treatment. They have an extremely low friction coefficient and highly reduce operation costs. Additionally, they offer much safer handling solution compared to a standard steel wire ropes.

PARAMETERS

Fiber	HMPE superior	Alkali resistance	excellent	Elongation	low (< 4% at break)
Specific gravity	0.97 (floating)	Chemicals resistance	excellent	Creep at 22 °C	low (0.002% per day)
UV resistance	excellent	Cold and frost resistance	excellent	Antistatic coating	on request
Abrasion resistance	excellent	Water resistance	excellent	Colors	yellow, black, silver
Acid resistance	excellent	Heat resistance	low (135 – 145 °C melting)		

8 STRAND

Diameter 40 - 72 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
40	5	88.10	128.5	1260.0
42	5 1/4	97.20	142.0	1392.5
44	5 1/2	106.20	155.6	1525.0
46	5 3/4	116.00	168.3	1650.0
48	6	125.50	181.1	1775.0
52	6 1/2	146.40	208.6	2045.0
56	7	168.80	237.7	2330.0
60	7 1/2	192.80	268.8	2635.0
64	8	218.30	300.9	2950.0
68	8 1/2	245.30	335.1	3285.0
72	9	273.80	370.8	3635.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

Antistatic coating

It is possible to get HMPE ropes with advanced antistatic surface coating for HMPE ropes on request. This special coating is water resistant and its application significantly reduces static electricity which is generated on the surface of HMPE ropes.

12 STRAND

Diameter 2 - 40 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
2	1/12	0.25	0.3	3.4
3	1/8	0.49	0.9	8.8
4	1/2	0.77	1.0	10.0
5	5/8	1.43	2.3	22.5
6	3/4	2.30	4.1	40.0
8	1	4.00	7.0	69.0
10	1 1/4	6.10	10.7	105.0
12	1 1/2	8.70	15.3	150.0
14	1 3/4	11.70	20.4	200.0
16	2	15.10	26.5	260.0
18	2 1/4	19.00	32.1	315.0
20	2 1/2	23.30	38.8	380,0
22	2 3/4	28.00	45.9	450.0
24	3	33.10	53.0	520.0
26	3 1/4	38.40	61.2	600.0
28	3 1/2	44.50	69.4	680.0
30	3 3/4	50.80	79.1	775.0
32	4	57.50	88.7	870.0
34	4 1/4	64.60	98.4	965.0
36	4 1/2	72.00	106.1	1040.0
38	4 3/4	80.00	119.9	1175.0
40	5	88.10	128.5	1260.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

MARINE / Mooring / Tow / Winch / Tug

OFFSHORE / Heavy lifting

TITAN PLUS

TITAN PLUS – an advanced braided composite rope with one of the highest tensile strengths on the market. The basic material of the rope is a mixture of Polys and high tenacity polyester fibres. High tenacity polyester multifilament fibres on the surface of the rope strands increase abrasion resistance, resistance to warming-up of the rope surface with subsequent melting of surface fibres and resistance to UV degradation in which way the total service life of the rope is prolonged.

PARAMETERS

Material	PES high tenacity multifilament and POLYS fibres	UV resistance	outstanding
Specific gravity	1.14 kg/dm^3	Abrasion resistance	outstanding
Floating	no	Water absorption	max. 0.5%
Melting temperature	260/165 °C	Dry and wet conditions	identical wet and dry conditions
		TCLL value	79%

8 STRAND

Diameter 32 - 104 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
32	4	68.5	27.3	268.0
36	4 1/2	80.0	34.3	336.0
40	5	108.0	42.8	420.0
44	5 1/2	124.0	50.3	493.0
48	6	148.0	59.5	583.0
52	6 1/2	173.0	69.4	680.0
56	7	201.0	80.1	785.0
60	7 1/2	231.0	91.3	895.0
64	8	268.0	102.0	1000.0
68	8 1/2	296.0	116.3	1140.0
72	9	334.0	129.5	1270.0
76	9 1/2	365.0	139.2	1365.0
80	10	411.0	158.1	1550.0
84	10 1/2	454.0	172.4	1690.0
88	11	497.0	190.7	1870.0
92	11 1/2	543.5	208.1	2040.0
96	12	590.0	225.4	2210.0
100	12 1/2	652.0	229.5	2250.0
104	13	714.0	233.6	2290.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

12 STRAND

Diameter 18 - 44 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
18	2 1/4	21.4	8.6	84.5
20	2 1/2	27.0	10.9	107.0
24	3	38.3	15.3	150.0
28	3 1/2	55.0	21.5	211.2
32	4	68.5	28.2	276.0
36	4 1/2	80.0	35.3	346.0
40	5	108.0	44.1	432.6
44	5 1/2	124.0	51.8	507.8

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Towing lines / Offshore lines / Mooring lines / Mooring tails

CRUISER PLUS

Cruiser Plus is very high tensile strength rope in comparison with standard ropes which allows to use ropes with smaller diameters which require less storage space. In addition, the rope exhibits better handling properties and non-rotating behavior in both dry and wet conditions.

PARAMETERS

Material	PES high tenacity multifilament and POLYS fibres
Specific gravity	0.99 kg/dm^3
Floating	yes
Melting temperature	260/165 °C
UV resistance	outstanding
Abrasion resistance	outstanding
Durability	outstanding
Water absorption	max. 0.1%
Dry and wet conditions	identical wet and dry conditions
TCLL value	76%

8 STRAND

Diameter 32 - 104 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
32	4	68.5	26.3	258.0
36	4 1/2	79.5	35.2	345.0
40	5	96.6	42.5	417.0
44	5 1/2	112.0	49.2	482.0
48	6	128.0	55.7	546.0
52	6 1/2	149.0	62.5	613.0
56	7	169.0	72.7	713.0
60	7 1/2	190.0	81.2	796.0
64	8	211.0	90.4	886.0
68	8 1/2	246.0	104.6	1025.0
72	9	267.0	115.8	1135.0
76	9 1/2	315.0	134.1	1315.0
80	10	348.0	147.7	1448.0
84	10 1/2	381.5	157.1	1540.0
88	11	415.0	182.6	1790.0
92	11 1/2	452.0	194.0	1902.0
96	12	489.0	205.4	2014.0
100	12 1/2	526.0	216.6	2124.0
104	13	563.0	228.0	2235.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

12 STRAND

Diameter 16 - 48 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
16	2 1/4	14.4	7.4	73.0
18	2 1/4	19.8	11.2	110.0
20	2 1/2	20.5	11.7	115.0
24	3	34.5	13.6	133.0
28	3 1/2	45.5	17.9	175.1
32	4	72.5	26.6	261.0
36	4 1/2	79.5	36.0	353.0
40	5	96.6	43.0	422.0
44	5 1/2	112.0	50.6	496.0
48	6	124.5	56.4	553.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Towing lines / Offshore lines / Mooring lines / Mooring tails

TITAN

TITAN consists of high tenacity polyolefin fibres – POLYS in the cores of the rope strands and high tenacity PES multifilament fibres on the surface of the rope strands and meets the requirements of the standard applicable to composite ropes. Its extreme strength as well as its excellent resistance to abrasion, UV radiation and temperature lend a new use dimension to the rope. The rope is very pleasant to the feel and very good for splicing of eyes.

PARAMETERS

Material	PES high tenacity multifilament and POLYS fibres	Abrasion resistance	outstanding
Specific gravity	1.15 kg/dm^3	Durability	outstanding
Floating	no	Water absorption	max. 0.7%
Melting temperature	260/165 °C	Dry and wet conditions	identical wet and dry conditions
UV resistance	outstanding	TCLL value	79%

8 STRAND

Diameter 32 - 104 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
32	4	55.2	24.8	242.8
36	4 1/2	71.7	29.1	285.5
40	5	88.5	35.9	351.8
44	5 1/2	107.0	43.0	421.8
48	6	127.0	50.0	490.0
52	6 1/2	150.0	57.8	567.0
56	7	173.0	66.2	649.3
60	7 1/2	199.0	75.7	742.0
64	8	227.0	85.7	840.0
68	8 1/2	256.0	96.0	941.3
72	9	287.0	107.6	1055.3
76	9 1/2	320.0	120.0	1176.0
80	10	354.0	132.3	1296.8
88	11	428.0	158.7	1555.8
96	12	510.0	184.1	1805.0
100	12 1/2	564.0	188.2	1845.0
104	13	617.6	191.6	1878.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

12 STRAND

Diameter 18 - 48 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
18	2 1/4	17.9	7.6	74.8
20	2 1/2	22.1	9.3	91.6
24	3	31.9	13.1	128.4
28	3 1/2	45.0	18.8	184.0
32	4	55.2	25.6	250.8
36	4 1/2	71.7	30.1	295.0
40	5	88.5	37.1	363.4
44	5 1/2	107.0	44.4	435.7
48	6	127.0	51.6	506.2

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Towing lines / Offshore lines / Mooring lines / Mooring tails

CRUISER

CRUISER is high tensile strength rope. Very high strength in comparison with standard polypropylene rope (up to 60% higher). Excellent strength-to-weight ratio of the rope. Economical ratio between BL and weight.

PARAMETERS

Material	PES high tenacity multifilament and POLYS fibres	Abrasion resistance	very good
Specific gravity	0.99 kg/dm^3	Durability	very good
Floating	yes	Water absorption	max. 0.1%
Melting temperature	260/165 °C	Dry and wet conditions	identical wet and dry conditions
UV resistance	very good	TCLL value	78%

8 STRAND

Diameter 30 - 104 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
30	3 3/4	44.9	18.5	181.7
32	4	51.1	21.0	205.8
36	4 1/2	64.4	26.2	257.3
40	5	79.2	33.5	328.8
44	5 1/2	96.8	40.0	392.4
48	6	114.4	47.1	462.0
50	6 1/4	124.3	51.0	500.0
52	6 1/2	134.2	54.8	537.6
56	7	156.2	62.9	616.8
60	7 1/2	179.3	71.4	699.6
64	8	203.5	80.4	788.4
68	8 1/2	231.0	90.2	884.4
72	9	257.4	100.4	984.0
76	9 1/2	288.2	111.1	1089.6
80	10	319.0	121.8	1194.0
88	11	386.1	145.7	1428.0
90	11 1/4	406.0	151.5	1485.0
92	11 1/2	432.4	161.4	1582.5
96	12	458.7	171.4	1680.0
100	12 1/2	499.2	185.5	1818.5
104	13	539.7	198.8	1949.0

Spliced Termination: -10 % / BL is in accordance with ISO 2307

12 STRAND

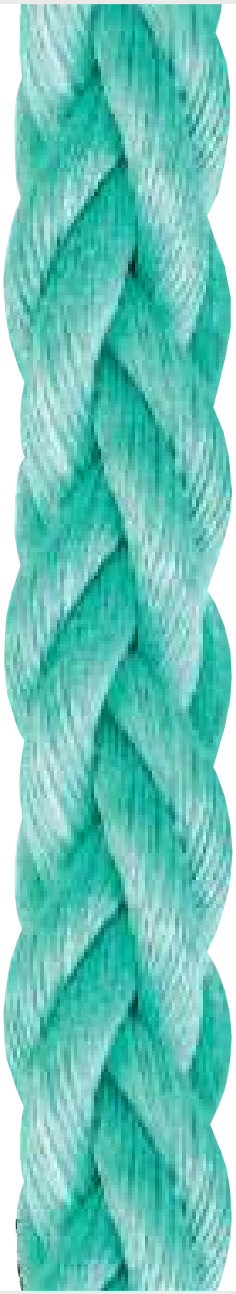
Diameter 18 - 48 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
18	2 1/4	16.3	7.1	70.0
20	2 1/2	19.8	8.7	85.0
24	3	28.6	11.8	116.0
28	3 1/2	39.5	16.3	160.0
32	4	51.1	21.4	210.0
36	4 1/2	64.4	27.0	265.0
40	5	79.2	34.6	339.0
44	5 1/2	96.8	40.4	396.0
48	6	112.0	47.7	468.0

Spliced Termination: -10 % / BL is in accordance with ISO 2307

APPLICATION

/ Towing lines / Offshore lines / Mooring lines / Mooring tails



POLYS

Modern material rope produced from our own high quality mixed Polyolefin made on our extrusion lines. This rope has very good strength and abrasion resistance, very good resistance to chemicals, easy maintenance, wide range of colors.

PARAMETERS

Material	POLYS fibres (mixture of PP and PE)	Abrasion resistance	good
Specific gravity	0.92 kg/dm^3	Durability	good
Floating	yes	Standard	EN 10572
Melting temperature	165 °C	Water absorption	max. 0.1%
UV resistance	good	Dry and wet conditions	identical wet and dry conditions

8 STRAND

Diameter 30 - 100 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
30	3 3/4	40.8	17.1	168.0
32	4	46.4	19.1	187.0
34	4 1/4	52.6	21.4	210.0
36	4 1/2	58.7	23.7	232.4
38	4 3/4	65.2	26.7	262.0
40	5	72.5	29.3	287.7
44	5 1/2	87.7	35.0	343.4
48	6	104.0	41.1	406.0
52	6 1/2	122.0	47.9	469.8
56	7	142.0	54.9	538.0
60	7 1/2	163.0	62.7	614.8
64	8	186.0	71.0	696.0
68	8 1/2	210.0	79.6	780.0
72	9	235.0	89.2	874.4
76	9 1/2	262.0	99.4	974.4
80	10	290.0	109.6	1074.5
84	10 1/2	320.5	116.0	1137.4
88	11	351.0	122.4	1200.2
92	11 1/2	384.0	133.5	1308.9
96	12	417.0	144.6	1417.5
100	12 1/2	452.0	155.4	1524.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

12 STRAND

Diameter 18 - 48 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
18	2 1/4	16.6	6.6	65.0
20	2 1/2	18.1	8.2	80.0
22	2 3/4	21.9	9.9	97.0
24	3	26.8	11.6	114.0
28	3 1/2	35.5	14.8	145.0
32	4	46.4	19.1	187.0
36	4 1/2	58.7	23.6	231.0
40	5	72.5	28.8	282.0
44	5 1/2	87.7	34.4	337.0
48	6	104.0	40.5	397.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Towing lines / Mooring lines / Fishing lines

PP MULTITEX

Modern material rope from high tenacity PP fibres made from our raw material produced from our own extrusion line. This type of rope has very good strength and abrasion resistance, very good resistance to chemicals, easy maintenance and handling, wide range of colors.

PARAMETERS

Material	PP Multitex	Abrasion resistance	good
Specific gravity	0.91 kg/dm^3	Durability	good
Floating	yes	Standard	ISO EN 1346
Melting temperature	165 °C	Water absorption	max. 0.1%
UV resistance	average	Dry and wet conditions	identical wet and dry conditions

8 STRAND

Diameter 30 - 104 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
30	3 3/4	40.7	13.4	131.3
32	4	46.3	15.2	149.1
36	4 1/2	58.6	18.4	180.0
40	5	72.3	23.8	233.0
44	5 1/2	87.5	28.4	278.0
48	6	104.0	33.4	327.0
52	6 1/2	122.0	38.7	379.0
56	7	142.0	44.5	436.0
60	7 1/2	163.0	50.5	495.0
64	8	185.0	56.9	558.0
68	8 1/2	210.0	63.8	625.0
72	9	234.0	70.6	692.0
76	9 1/2	261.0	78.5	770.0
80	10	289.0	86.7	850.0
84	10 1/2	320.0	89.1	874.0
88	11	350.0	96.9	950.0
92	11 1/2	393.5	107.5	1054.0
96	12	417.0	114.3	1121.0
100	12 1/2	453.0	125.3	1228.4
104	13	489.0	131.8	1292.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

12 STRAND

Diameter 14 - 40 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
14	1 3/4	9.70	3.5	34.0
16	2	12.40	4.0	39.0
18	2 1/4	16.20	5.8	57.0
20	2 1/2	19.30	6.9	68.0
22	2 3/4	22.00	7.4	73.0
24	3	26.00	9.1	89.0
28	3 1/2	35.40	11.7	115.0
32	4	46.30	17.1	168.0
36	4 1/2	58.60	20.7	203.0
40	5	72.30	23.8	233.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Towing lines / Offshore lines / Mooring lines / Mooring tails

POLY PROPYLENE

The Polypropylene ropes are the general purpose ropes which have a good strength, are good UV-light and weather resistance, easy to handling and do not absorb water.

8 STRAND

Diameter 30 - 104 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
30	3 3/4	40.7	13.5	132.0
32	4	46.3	15.3	150.1
34	4 1/4	52.7	17.1	168.0
36	4 1/2	58.6	19.1	187.0
38	4 3/4	65.5	21.2	208.3
40	5	72.3	23.3	228.5
42	5 1/4	80.0	25.8	253.0
44	5 1/2	87.5	28.5	279.5
46	5 3/4	96.0	31.1	304.8
48	6	104.0	33.5	328.9
50	6 1/4	113.0	35.4	347.3
52	6 1/2	122.0	38.9	381.8
54	6 3/4	132.0	41.9	410.6
56	7	142.0	44.7	438.2
60	7 1/2	163.0	50.8	498.0
62	7 3/4	174.0	54.0	529.0
64	8	185.0	57.2	561.2
66	8 1/4	197.3	60.7	595.0
68	8 1/2	210.0	64.3	630.2
70	8 3/4	222.0	67.7	664.0
72	9	234.0	71.3	699.2
76	9 1/2	262.0	79.1	775.1
78	9 3/4	276.0	83.4	818.0
80	10	289.0	86.7	850.0
84	10 1/2	320.0	93.8	920.0
88	11	350.0	102.0	1000.0
92	11 1/2	393.5	113.2	1110.0
96	12	417.0	120.4	1180.0
100	12 1/2	453.0	131.9	1293.0
104	13	489.0	138.7	1360.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

PARAMETERS

Material	PP split film
Specific gravity	0.91 kg/dm^3
Floating	yes
Melting temperature	165 °C
UV resistance	average
Abrasion resistance	average
Standard	ISO EN 1346
Water absorption	max. 0.1%
Dry and wet conditions	identical wet and dry conditions

12 STRAND

Diameter 16 - 48 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
16	2	11.60	4.8	47.0
20	2 1/2	17.60	7.1	70.0
22	2 3/4	21.90	9.4	92.0
24	3	26.00	10.3	101.0
28	3 1/2	35.40	12.0	118.0
30	3 3/4	40.70	14.1	138.0
32	4	44.20	16.1	158.0
36	4 1/2	58.60	19.4	190.5
40	5	72.30	23.8	233.0
42	5 1/4	79.90	26.0	255.3
44	5 1/2	87.50	29.8	292.0
48	6	104.00	37.9	372.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Towing lines / Mooring lines / Fishing lines

POLYAMIDE

Polyamide ropes, thanks to their properties, are able to absorb shock energy, have excellent strength and very good abrasion resistance. In comparison with polyolefin ropes, PA ropes have different properties, such as higher elongation, higher strength, better resistance to different weather conditions.

PARAMETERS

Material	PA multifilament fibres
Specific gravity	1.14 kg/dm^3
Floating	no
Melting temperature	215 °C
UV resistance	very good
Abrasion resistance	very good
Durability	good
Standard	ISO EN 1440
Water absorption	4%
Dry and wet conditions	strength declines 10% when wet
TCLL value	55%

8 STRAND - HiTen

Diameter 40 - 96 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
40	5	100.00	40.0	392.0
44	5 1/2	121.00	48.1	471.5
48	6	144.00	58.0	569.0
52	6 1/2	170.00	67.5	662.0
56	7	201.00	77.2	757.3
60	7 1/2	232.00	88.5	867.7
64	8	253.00	101.5	995.0
68	8 1/2	291.50	115.1	1128.0
72	9	330.00	134.7	1320.5
76	9 1/2	362.50	143.6	1407.5
80	10	395.00	158.5	1554.4
84	10 1/2	428.50	175.1	1716.3
88	11	463.50	192.1	1883.1
92	11 1/2	515.00	196.9	1930.0
96	12	570.00	204.0	2000.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

12 STRAND

Diameter 16 - 40 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
16	2	16.00	5.9	58.0
20	2 1/2	25.00	8.7	85.0
24	3	36.00	13.1	128.0
28	3 1/2	49.00	16.5	162.0
30	3 3/4	56.00	18.7	183.0
32	4	64.00	22.4	220.0
36	4 1/2	81.00	27.5	270.0
40	5	100.00	33.2	325.0

Spliced Termination: -10 % / BL is in accordance with ISO 2307

8 STRAND

Diameter 30 - 104 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
30	3 3/4	56.00	17.3	170.0
32	4	64.00	20.4	200.0
36	4 1/2	81.00	25.5	250.0
40	5	100.00	30.6	300.0
44	5 1/2	121.00	36.2	355.0
48	6	144.00	43.4	425.0
52	6 1/2	170.00	51.0	500.0
56	7	197.00	57.1	560.0
60	7 1/2	226.00	64.3	630.0
64	8	257.00	72.4	710.0
68	8 1/2	286.50	81.4	798.0
72	9	325.00	91.8	900.0
76	9 1/2	357.00	100.5	985.0
80	10	401.00	114.2	1120.0
84	10 1/2	443.50	124.4	1220.0
88	11	486.00	134.6	1320.0
92	11 1/2	523.50	147.9	1450.0
96	12	578.00	163.2	1600.0
100	12 1/2	624.50	174.4	1710.0
104	13	677.50	189.7	1860.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Towing lines / Mooring lines / Fishing lines

POLYESTER

High tenacity polyester ropes and cords are characterized by their excellent resistance to weather conditions, high strength and excellent abrasion resistance, they remain flexible and soft even when wet.

PARAMETERS

Material	PES multifilament fibres	Abrasion resistance	outstanding
Specific gravity	1.38 kg/dm^3	Durability	very good
Floating	no	Manipulation	good
Melting temperature	260 °C	Standard	ISO EN 1441
UV resistance	outstanding	Water absorption	max. 0.5%
		Dry and wet conditions	identical wet and dry conditions

8 STRAND

Diameter 30 - 96 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
30	3 3/4	68.3	18.9	185.0
32	4	77.7	21.2	208.0
36	4 1/2	98.4	27.5	270.0
40	5	121.0	36.7	360.0
44	5 1/2	147.0	42.3	415.0
48	6	175.0	47.9	470.0
52	6 1/2	205.0	57.1	560.0
56	7	238.0	64.3	630.0
60	7 1/2	273.0	78.5	770.0
64	8	311.0	87.7	860.0
72	9	393.0	102.5	1005.0
80	10	486.0	120.1	1177.0
88	11	588.0	137.7	1350.0
96	12	699.0	155.3	1523.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

12 STRAND

Diameter 16 - 40 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
16	2	19.40	4.7	46.0
20	2 1/2	30.40	7.9	77.0
24	3	43.70	11.2	110.0
26	3 1/4	51.10	13.0	127.0
28	3 1/2	59.50	14.6	143.0
30	3 3/4	68.30	16.4	161.0
32	4	77.70	18.8	184.0
36	4 1/2	98.40	23.5	230.0
40	5	121.00	29.3	287.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Towing lines / Offshore lines / Mooring lines / Mooring tails

MOORING TAILS AND RING TAILS

COMPOSITE MATERIAL
CRUISER / CRUISER PLUS
TITAN PLUS

POLYAMIDE MATERIAL
POLYAMIDE

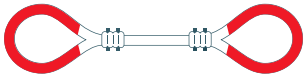
Mooring tails provide elasticity and shock/energy absorbing within the mooring arrangement and prevent damages to primary mooring line. Used especially in combination with steel or HMPE ropes in mooring, towing and offshore applications.

All mooring tails are produced according to latest OCIMF regulations with DNV GL class certificate.

STANDARD LENGTHS PRODUCED

For ring tails: 11 m or 22 m effective working length with rope protection. Ring tail breaking loads are in tables on the pages 19 and 20.

For mooring tails: 11 m or 22 m effective working length with 2 protected eyes of 2 m or 1 m for mooring tails.



EYE SPLICING METHOD 1 WITH POLYESTER ROPE PROTECTION

Recommended for: CRUISER / CRUISER PLUS TITAN / TITAN PLUS / POLYS / POLYPROPYLENE

EYE SPLICING METHOD 1 WITH THIMBLE

Recommended for: CRUISER / CRUISER PLUS / TITAN TITAN PLUS / POLYS / POLYPROPYLENE

EYE SPLICING METHOD 2

Recommended for: POLYAMIDE / POLYESTER PP MULTITEX / HMPE

BRUMMEL SPLICE

Recommended for: HMPE ropes with small diameters

SINGLE BRAIDED TUCK SPLICE METHOD WITH POLYESTER PROTECTION

Recommended for: HMPE / CRUISER / CRUISER PLUS TITAN / TITAN PLUS / POLYS / POLYPROPYLENE

TANDEM BRAIDED TUCK SPLICE METHOD WITH POLYESTER PROTECTION

Recommended for: POLYAMIDE / POLYESTER PP MULTITEX

SINGLE BRAIDED TUCK SPLICE METHOD WITH POLYESTER PROTECTION

Recommended for: HMPE (larger diameters) / CRUISER / TITAN CRUISER PLUS / TITAN PLUS / POLYS / POLYPROPYLENE

TUCK SPLICE

Recommended for: all twisted ropes from our product range

EYE SPLICING

The eye splice is used to place a permanent loop in the end of a rope, generally for connection purposes to a fixed point. An eye is also used to form the rope around a thimble, which is used to protect the rope, especially when it is to be attached to a shackle, chain or wire rope. We can make full protected eye with polyester tubular cloth and full protected splice with seizing, which increase service life of ropes.

POSSIBLE SPLICING ADJUSTMENTS:

- splice with seizing
- splicing with thimble
- polyester rope protection
- polyester rope protection with velcro closure

COMPOSITE MATERIAL

The basic material of the rope is a mixture of Polys and high tenacity polyester fibres. In general, composite has medium elongation (15 - 17% at break), high energy absorption, the rope remains elastic for a longer time. Breaking load in dry is equal as wet. The strength of composite ropes is higher than that of nylon ropes. Due to this fact smaller diameter of rope can be used, providing better and safer handling. As per OCIMF regulation, the required breaking load must be 25% higher than steel rope.

CRUISER

FLOATABLE ROPES

- high tensile strength rope
- very high strength in comparison with standard polypropylene rope (up to 60% higher)
- excellent strength-to-weight ratio of the rope
- economical ratio between BL and weight.

8 STRAND Mooring tails

Diameter	Weight of rope with eyes (kg) ± 5%		Spliced break load	
mm	11 m	22 m	t	kN
52	23.5	39.6	49.3	483.8
56	27.5	46.10	56.6	555.1
60	31.4	52.90	64.2	629.6
64	35.6	60.03	72.4	709.6
68	41.6	69.30	81.2	796.0
72	46.3	77.22	90.3	885.6
76	51.9	86.50	100.0	980.6
80	57.4	95.70	109.6	1074.6
88	69.5	115.83	131.1	1285.2
90	73.1	121.80	136.3	1336.5
92	77.8	129.72	145.2	1423.8
96	82.6	137.61	154.2	1512.0
100	89.9	149.76	166.9	1636.6
104	97.1	161.91	178.9	1754.1

Spliced Termination: -10%
Spliced break load in accordance with ISO 2307

8 STRAND Ring tails

Diameter	Weight of rope with eyes (kg) ± 5%		Spliced break load	
mm	11 m	22 m	t	kN
52	33.55	63.07	79.0	774.1
56	39.00	73.32	90.6	888.2
60	44.83	84.27	102.8	1007.4
64	50.86	95.65	115.8	1135.4
68	57.75	108.57	129.9	1273.6
72	64.35	120.98	144.5	1417.0
76	72.05	135.45	160.0	1569.0
80	79.75	149.93	175.4	1719.4
88	96.53	181.47	209.7	2056.3
90	101.50		218.1	2138.4
92	108.10		232.4	2278.1
96	114.68		246.8	2419.2
100	124.80		267.1	2618.6
104	134.93		286.3	2806.6

Spliced Termination: -10%
Spliced break load in accordance with ISO 2307

CRUISER PLUS

FLOATABLE ROPES

- very high MBL compared to other composite ropes
- low weight compared to other composite ropes, best BL/weight ratio
- increased amount of high tenacity polyester
- multifilament fibres on the surface of the rope
- strands significantly increases the abrasion resistance

8 STRAND Mooring tails

Diameter	Weight of rope with eyes (kg) ± 5%		Spliced break load	
mm	11 m	22 m	t	kN
52	27.57	45.45	56.3	551.7
56	31.27	51.55	65.5	641.7
60	35.15	57.95	73.1	716.4
64	39.04	64.36	81.3	797.4
68	49.20	76.26	94.1	922.5
72	53.40	82.77	104.2	1021.5
76	63.00	97.65	120.7	1183.5
80	69.60	107.88	132.9	1303.2
88	76.30	118.27	141.4	1386.0
90	83.00	128.65	164.3	1611.0
92	90.40	140.12	174.6	1711.8
96	97.80	151.59	184.9	1812.6
100	105.20	163.06	195.0	1912.1
104	112.60	174.53	205.2	2011.5

Spliced Termination: -10%
Spliced break load in accordance with ISO 2307

8 STRAND Ring tails

Diameter	Weight of rope with eyes (kg) ± 5%		Spliced break load	
mm	11 m	22 m	t	kN
52	37.25	70.03	90.0	882.7
56	42.25	79.43	104.7	1026.7
60	47.50	89.30	116.9	1146.2
64	52.75	99.17	130.1	1275.8
68	61.50	115.62	150.6	1476.0
72	66.75	125.49	166.7	1634.4
76	78.75	148.05	193.1	1893.6
80	87.00	163.56	212.7	2085.1
88	95.38	179.31	226.2	2217.6
90	103.75	195.05	262.9	2577.6
92	113.00		279.4	2738.9
96	122.25		295.8	2900.2
100	131.50		312.1	3059.4
104	140.75		328.3	3218.4

Spliced Termination: -10%
Spliced break load in accordance with ISO 2307

TITAN PLUS

- strongest among composite ropes
- increased amount of high tenacity polyester
- multifilament fibres on the surface of the rope
- strands significantly increases the abrasion resistance

8 STRAND Mooring tails

Diameter	Weight of rope with eyes (kg) ± 5%		Spliced break load	
mm	11 m	22 m	t	kN
52	32.00	52.77	62.4	612.0
56	37.19	61.31	72.1	706.5
60	42.74	70.46	82.2	805.5
64	49.58	81.74	91.8	900.0
68	59.20	91.76	104.7	1026.0
72	66.80	103.54	116.6	1143.0
76	73.00	113.15	125.3	1228.5
80	82.20	127.41	142.3	1395.0
88	90.80	140.74	155.1	1521.0
90	99.40	154.07	171.7	1683.0
92	108.70	168.50	187.3	1836.0
96	118.00	182.90	202.9	1989.0
100	130.40	202.12	206.6	2025.0
104	142.80	221.34	210.2	2061.0

Spliced Termination: -10%
Spliced break load in accordance with ISO 2307

8 STRAND Ring tails

Diameter	Weight of rope with eyes (kg) ± 5%		Spliced break load	
mm	11 m	22 m	t	kN
52	43.25	81.31	99.9	979.2
56	50.25	94.47	115.3	1130.4
60	57.75	108.57	131.5	1288.8
64	67.00	125.96	146.9	1440.0
68	74.00	139.12	167.4	1641.6
72	83.50	156.98	186.5	1828.8
76	91.25	171.55	200.5	1965.6
80	102.75	193.17	227.7	2232.0
84	113.50	213.38	248.2	2433.6
88	124.25	233.59	274.7	2692.8
92	135.86		299.6	2937.6
96	147.50		324.6	3182.4
100	163.00		330.5	3240.0
104	178.50		336.4	3297.6

Spliced Termination: -10%
Spliced break load in accordance with ISO 2307

POLYAMIDE

- advantage is extra shock absorption, high elongation (25% at break) and excellent UV protection.
- as per OCIMF regulation, the required breaking load must be 37% higher than steel rope.

POLYAMIDE MATERIAL

8 STRAND Mooring tails

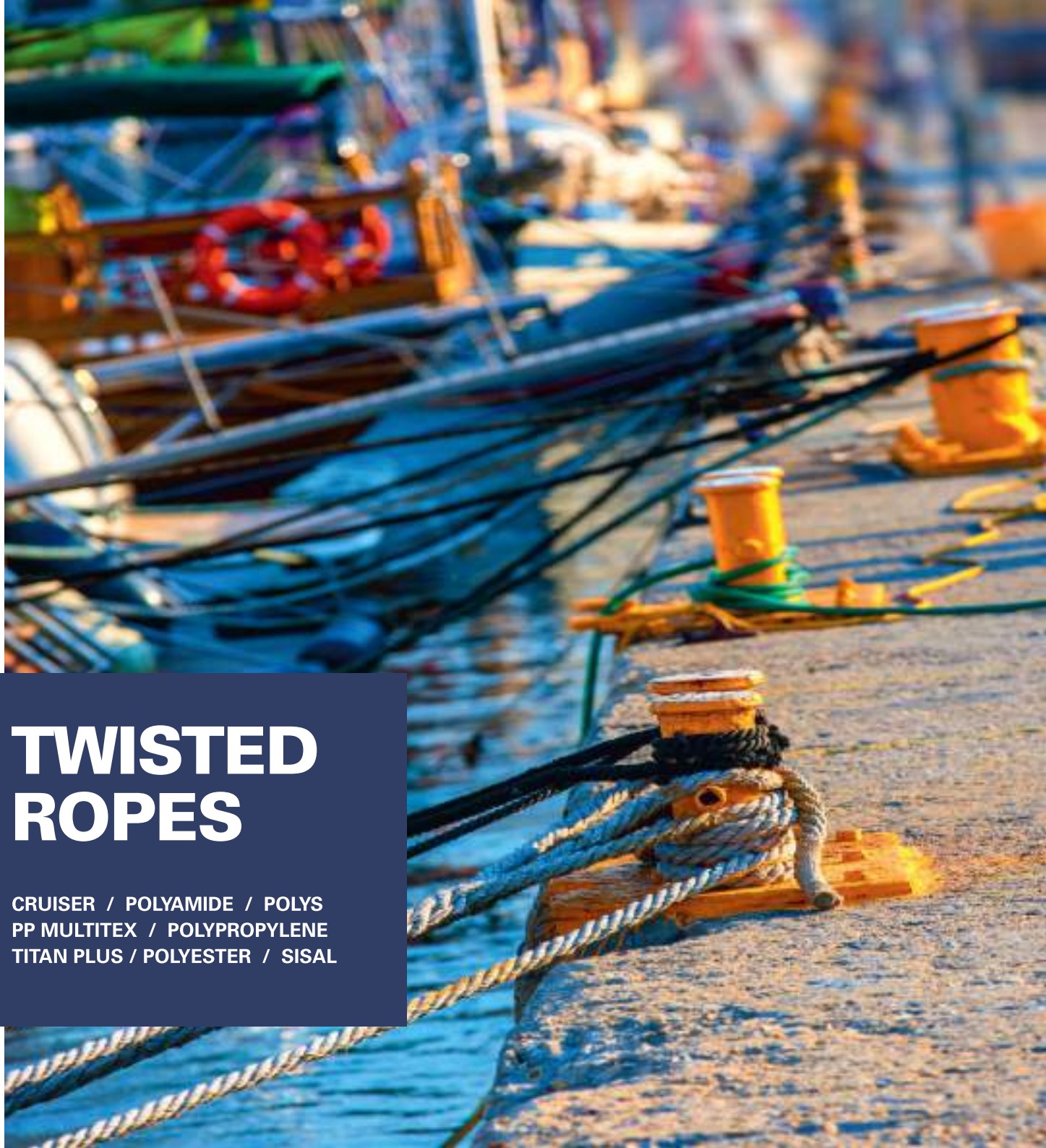
Diameter	Weight of rope with eyes (kg) ± 5%		Spliced break load	
mm	11 m	22 m	t	kN
52	31.45	51.85	45.9	450.0
56	36.45	60.09	51.4	504.0
60	41.81	68.93	57.8	567.0
64	47.55	78.39	65.2	639.0
68	57.30	88.82	73.3	718.2
72	65.00	100.75	82.6	810.0
76	71.40	110.67	90.4	886.5
80	80.20	124.31	102.8	1008.0
88	88.70	137.49	112.0	1098.0
90	97.20	150.66	121.2	1188.0
92	104.70	162.29	133.1	1305.0
96	115.60	179.18	146.9	1440.0
100	124.90	193.60	157.0	1539.0
104	135.50	210.03	170.8	1674.1

Spliced Termination: -10%
Spliced break load in accordance with ISO 2307

8 STRAND Ring tails

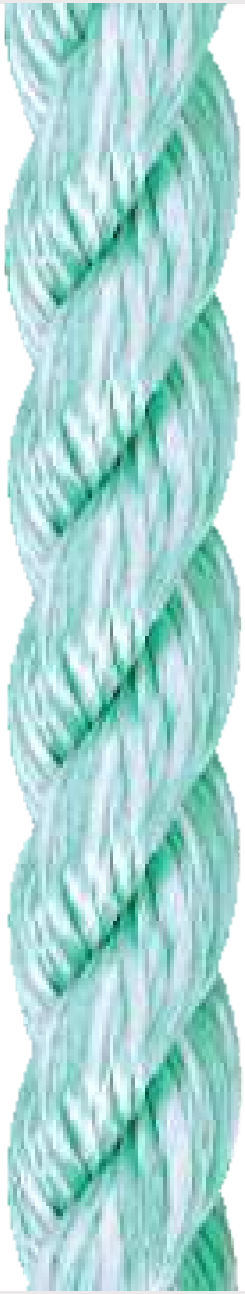
Diameter	Weight of rope with eyes (kg) ± 5%		Spliced break load	
mm	11 m	22 m	t	kN
52	42.50	79.90	73.4	720.0
56	49.25	92.59	82.3	806.4
60	56.50	106.22	92.5	907.2
64	64.25	120.79	104.3	1022.4
68	71.63	134.66	117.2	1149.1
72	81.25	152.75	132.2	1296.0
76	89.25	167.79	144.7	1418.4
80	100.25	188.47	164.5	1612.8
88	110.86	208.45	179.2	1756.8
90	121.50		193.9	1900.8
92	130.88		213.0	2088.0
96	144.50		235.0	2304.0
100	156.13		251.2	2462.4
104	169.38		273.2	2678.6

Spliced Termination: -10%
Spliced break load in accordance with ISO 2307



TWISTED ROPES

CRUISER / POLYAMIDE / POLYS
PP MULTITEX / POLYPROPYLENE
TITAN PLUS / POLYESTER / SISAL



CRUISER

Modern composite rope with excellent strength and abrasion resistance, floating on water, soft to the touch, very good resistance to chemicals, easy to handle and easy maintenance ropes.

PARAMETERS

Material	PES high tenacity multifilament and POLYS fibres	UV resistance	very good
Specific gravity	0.99 kg/dm^3	Abrasion resistance	very good
Floating	yes	Durability	very good
Melting temperature	260/165 °C	Water absorption	max. 0.1%
		Dry and wet conditions	identical wet and dry conditions

3 STRAND

Diameter 3 - 36 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
3	3/8	0.60	0.3	3.1
4	1/2	1.10	0.5	5.0
5	5/8	1.40	0.7	6.5
6	3/4	2.00	1.0	10.0
8	1	3.30	1.5	14.6
10	1 1/4	5.00	2.3	22.5
12	1 1/2	7.20	3.2	31.8
14	1 3/4	9.90	4.3	42.5
16	2	12.70	5.5	54.4
18	2 1/4	16.30	6.9	68.1
20	2 1/2	19.80	8.4	82.8
22	2 3/4	24.20	10.1	98.9
24	3	28.60	11.8	116.0
26	3 1/4	33.60	13.6	133.8
28	3 1/2	39.10	15.7	153.8
30	3 3/4	44.60	17.9	175.0
32	4	50.60	20.0	196.3
36	4 1/2	63.80	23.0	225.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

4 STRAND

Diameter 8 - 36 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
8	1	3.30	1.4	13.9
10	1 1/4	5.00	2.2	21.4
12	1 1/2	7.20	3.1	30.2
14	1 3/4	9.90	4.1	40.4
16	2	12.70	5.3	51.7
18	2 1/4	16.30	6.6	64.7
20	2 1/2	19.80	8.0	78.7
22	2 3/4	24.20	9.6	94.0
24	3	28.60	11.2	110.2
26	3 1/4	33.60	13.0	127.1
28	3 1/2	39.10	14.9	146.1
30	3 3/4	44.60	17.0	166.3
32	4	50.60	19.0	186.5
36	4 1/2	63.80	21.8	213.8

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Fishing ropes / Auxiliary ropes / Mooring ropes / Towing ropes

POLYAMIDE

Polyamide ropes, thanks to their properties, are able to absorb shock energy, have excellent strength and very good abrasion resistance.

PARAMETERS

Material	PA multifilament fibres	Abrasion resistance	very good
Specific gravity	1.14 kg/dm^3	Durability	good
Floating	no	Standard	ISO EN 1440
Melting temperature	215 °C	Water absorption	4%
UV resistance	very good	Dry and wet conditions	strength declies 10% when wet

3 STRAND

Diameter 2 - 36 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
2	1/4	0.35	0.1	1.4
3	1/3	0.55	0.3	3.0
4	1/2	0.99	0.4	3.8
5	5/8	1.54	0.6	5.6
6	3/4	2.22	0.8	8.0
7	7/8	3.00	1.0	10.2
8	1	3.95	1.4	14.0
10	1 1/4	6.17	2.2	21.2
12	1 1/2	8.88	3.1	30.1
14	1 3/4	12.10	4.1	40.0
16	2	15.80	5.3	51.9
18	2 1/4	20.00	6.6	64.3
20	2 1/2	24.70	8.2	80.0
22	2 3/4	29.90	9.7	95.0
24	3	35.50	11.4	112.0
26	3 1/4	41.70	13.2	129.0
28	3 1/2	48.40	15.3	150.0
30	3 3/4	55.50	17.3	170.0
32	4	63.20	19.6	192.0
36	4 1/2	80.00	24.5	240.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

4 STRAND

Diameter 8 - 36 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
8	1	3.95	1.3	13.0
10	1 1/4	6.17	2.1	20.5
12	1 1/2	8.88	2.9	28.0
14	1 3/4	12.10	3.8	37.0
16	2	15.80	5.0	49.0
18	2 1/4	20.00	6.4	63.0
20	2 1/2	24.70	8.0	78.4
22	2 3/4	29.90	9.5	93.1
24	3	35.50	11.3	111.1
26	3 1/4	41.70	13.0	127.6
30	3 3/4	55.50	17.1	167.2
36	4 1/2	80.00	24.0	235.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Fishing ropes / Auxiliary ropes / Mooring ropes / Towing ropes

POLYS

Modern material rope produced from our own high quality mixed Polyolefin made on our extrusion lines. This rope has very good strength and abrasion resistance, very good resistance to chemicals, easy maintenance, wide range of colors.

PARAMETERS

Material	POLYS fibres (mixture of PP and PE)	Abrasion resistance	good
Specific gravity	0.92 kg/dm^3	Durability	good
Floating	yes	Standard	EN 10572
Melting temperature	165 °C	Water absorption	max. 0.1%
UV resistance	good	Dry and wet conditions	identical wet and dry conditions

3 STRAND

Diameter 3 - 40 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
3	1/3	0.55	0.3	2.7
4	1/2	0.80	0.4	4.0
5	5/8	1.30	0.6	6.0
6	3/4	1.63	0.8	8.3
7	7/8	2.20	1.1	11.2
8	1	2.90	1.5	14.3
10	1 1/4	4.53	2.2	21.6
12	1 1/2	6.52	3.1	30.4
14	1 3/4	8.88	4.2	41.6
16	2	11.60	5.3	52.2
18	2 1/4	14.70	6.7	66.1
20	2 1/2	18.10	8.1	79.7
22	2 3/4	21.90	9.7	95.5
24	3	26.10	11.4	111.6
26	3 1/4	30.60	13.2	129.1
28	3 1/2	35.50	15.0	147.0
30	3 3/4	40.80	17.1	168.0
32	4	46.40	19.1	187.7
36	4 1/2	58.70	21.7	213.1
38	4 3/4	65.20	23.2	227.3
40	5	72.50	24.4	239.6

Spliced Termination: -10% / BL is in accordance with ISO 2307

4 STRAND

Diameter 14 - 40 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
14	1 3/4	8.88	3.6	35.0
16	2	11.60	4.4	43.3
18	2 1/4	14.70	5.4	53.1
20	2 1/2	18.10	7.0	68.5
24	3	26.10	9.1	89.6
30	3 3/4	40.80	13.8	135.0
32	4	46.40	15.2	148.8
36	4 1/2	58.70	19.0	186.3
40	5	72.50	23.1	226.3

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Fishing ropes / Auxiliary ropes / Mooring ropes / Towing ropes

PP MULTITEX

Modern material rope from high tenacity PP fibres made from our raw material produced from our own extrusion line. This type of rope has very good strength and abrasion resistance, very good resistance to chemicals, easy maintenance and handling, wide range of colors.

PARAMETERS

Material	PP multitex	Abrasion resistance	good
Specific gravity	0.91 kg/dm^3	Durability	good
Floating	yes	Standard	ISO EN 1346
Melting temperature	165 °C	Water absorption	max. 0.1%
UV resistance	average	Dry and wet conditions	identical wet and dry conditions

3 STRAND

Diameter 3 - 40 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
3	1/3	0.50	0.2	1.8
4	1/2	0.72	0.3	3.2
5	5/8	1.13	0.5	5.3
6	3/4	1.63	0.7	6.7
7	7/8	2.20	0.9	9.0
8	1	2.89	1.2	11.8
10	1 1/4	4.52	1.7	17.0
12	1 1/2	6.51	2.6	25.0
14	1 3/4	8.86	3.4	33.5
16	2	11.60	4.3	42.5
18	2 1/4	14.60	5.4	53.0
20	2 1/2	18.10	6.4	63.0
22	2 3/4	21.90	7.7	75.0
24	3	26.00	9.2	90.0
26	3 1/4	30.60	10.8	106.0
28	3 1/2	35.40	12.0	118.0
30	3 3/4	40.70	13.5	132.0
32	4	46.30	15.3	150.0
36	4 1/2	58.60	19.4	190.0
40	5	73.20	24.1	236.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

4 STRAND

Diameter 10 - 34 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
10	1 1/4	4.52	1.7	16.5
12	1 1/2	6.51	2.3	22.5
14	1 3/4	8.86	3.1	30.0
16	2	11.60	3.9	38.3
18	2 1/4	14.60	4.8	47.5
20	2 1/2	18.10	6.1	60.0
22	2 3/4	21.90	7.2	71.0
24	3	26.00	8.2	80.0
26	3 1/4	30.60	9.7	95.0
28	3 1/2	35.40	10.8	106.0
30	3 3/4	40.70	12.8	125.0
32	4	46.30	14.3	140.0
34	4 1/2	52.40	15.8	155.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Fishing ropes / Auxiliary ropes / Mooring ropes / Towing ropes

POLY PROPYLENE

The Polypropylene ropes are the general purpose ropes which have a good strength, are good UV-light and weather resistance, easy to handling and do not absorb water.

3 STRAND

Diameter 3 - 40 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
3	1/3	0.50	0.2	2.0
4	1/2	0.72	0.4	3.8
6	3/4	1.63	0.7	7.0
7	7/8	2.20	0.9	9.3
8	1	2.89	1.2	11.6
10	1 1/4	4.52	1.8	17.2
11	1 3/8	5.50	2.1	20.5
12	1 1/2	6.51	2.5	24.2
13	1 5/8	7.70	2.9	28.0
14	1 3/4	8.86	3.3	32.4
15	1 7/8	10.30	3.8	37.7
16	2	11.60	4.2	41.4
17	2 1/8	13.10	4.7	46.5
18	2 1/4	14.60	5.3	51.9
19	2 3/8	16.40	5.7	56.1
20	2 1/2	18.10	6.4	62.8
22	2 3/4	21.90	7.7	75.2
24	3	26.00	9.0	88.3
26	3 1/4	30.60	10.5	102.5
28	3 1/2	35.40	12.0	117.6
30	3 3/4	40.70	13.6	133.3
32	4	46.30	15.3	150.1
34	4 1/4	52.00	16.7	163.9
36	4 1/2	58.60	19.1	187.0
38	4 3/4	65.20	20.6	201.9
40	5	72.30	23.3	228.5

Spliced Termination: -10% / BL is in accordance with ISO 2307

PARAMETERS

Material	PP split film
Specific gravity	0.91 kg/dm^3
Floating	yes
Melting temperature	165 °C
UV resistance	average
Abrasion resistance	average
Standard	ISO EN 1346
Water absorption	max. 0.1%
Dry and wet conditions	identical wet and dry conditions

4 STRAND

Diameter 7 - 40 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
7	3/4	2.20	0.9	8.7
8	1	3.00	1.0	9.7
10	1 1/4	4.52	1.6	15.2
12	1 1/2	6.51	2.2	21.5
14	1 3/4	8.86	3.0	29.6
16	2	11.60	3.7	36.6
18	2 1/4	14.60	5.1	49.6
20	2 1/2	18.10	5.7	56.3
22	2 3/4	21.90	6.9	67.5
24	3	26.00	8.0	78.9
26	3 1/4	30.60	9.3	91.3
28	3 1/2	35.40	10.6	103.8
30	3 3/4	40.70	12.1	118.8
32	4	46.30	13.6	133.1
36	4 1/2	58.60	15.3	150.0
40	5	73.20	19.4	190.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Fishing ropes / Auxiliary ropes / Mooring ropes / Towing ropes

TITAN PLUS

TITAN PLUS – an advanced twisted composite rope with one of the highest tensile strengths on the market. The basic material of the rope is a mixture of Polys and high tenacity polyester fibres. High tenacity polyester multifilament fibres on the surface of the rope strands increase abrasion resistance, resistance to warming-up of the rope surface with subsequent melting of surface fibres and resistance to UV degradation in which way the total service life of the rope is prolonged.

PARAMETERS

Material	PES high tenacity multifilament and POLYS fibres
Specific gravity	0.14 kg/dm^3
Floating	no
Melting temperature	260/165 °C
UV resistance	outstanding
Abrasion resistance	outstanding
Water absorption	max. 0.5%
Standard	ISO EN 10556
Dry and wet conditions	identical wet and dry conditions
TCLL value	79%

3 STRAND

Diameter 3 - 36 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
3	3/8	0.60	0.3	2.9
4	1/2	0.90	0.5	4.5
5	5/8	1.40	0.6	5.9
6	3/4	1.80	0.8	7.8
7	7/8	2.60	1.1	10.5
8	1	3.60	1.4	14.0
10	1 1/4	5.60	2.1	21.0
12	1 1/2	8.10	3.0	29.7
14	1 3/4	11.00	4.1	40.0
16	2	14.40	5.3	51.8
18	2 1/4	18.20	6.6	64.8
22	2 3/4	27.20	9.7	95.0
24	3	32.40	11.4	111.3
26	3 1/4	38.00	13.3	130.0
28	3 1/2	44.10	15.3	149.8
30	3 3/4	50.50	17.4	170.6
32	4	57.50	19.7	193.4
36	4 1/2	72.80	24.7	242.3

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Fishing ropes / Auxiliary ropes / Mooring ropes / Towing ropes

POLYESTER

High tenacity polyester ropes and cords are characterized by their excellent resistance to weather conditions, high strength and excellent abrasion resistance, they remain flexible and soft even when wet.

PARAMETERS

Material	PES multifilament fibres
Specific gravity	1.38 kg/dm^3
Floating	no
Melting temperature	260 °C
UV resistance	outstanding
Abrasion resistance	outstanding
Durability	very good
Manipulation	good
Standard	ISO EN 1441
Water absorption	max. 0.5%
Dry and wet conditions	identical wet and dry conditions

3 STRAND

Diameter 3 - 36 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
3	1/3	0.50	0.2	2.0
4	1/2	1.21	0.3	2.8
5	5/8	1.90	0.4	4.3
6	3/4	2.73	0.6	6.1
8	1	4.85	1.1	10.6
10	1 1/4	7.58	1.7	16.2
12	1 1/2	10.90	2.3	23.0
14	1 3/4	14.90	3.2	30.9
16	2	19.40	4.1	40.0
18	2 1/4	24.60	5.1	50.0
20	2 1/2	30.30	6.2	61.0
22	2 3/4	36.70	7.5	73.1
24	3	43.70	8.8	86.1
26	3 1/4	51.20	10.3	101.0
28	3 1/2	59.40	12.0	118.0
30	3 3/4	68.20	13.5	132.0
32	4	77.60	15.3	150.0
36	4 1/2	98.20	19.4	190.0

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Fishing ropes / Auxiliary ropes / Mooring ropes / Towing ropes

SISAL

The hard fibre rope is more and more replaced by the man-made fibre rope, in spite of this, these ropes still have their appeal for decorative purposes, and in the engineering industry for their ability to absorb oil (i. e. steel wire rope fillers).

PARAMETERS

Material	natural fibres	Abrasion resistance	poor
Specific gravity	1.33 – 1.35 kg/dm^3	Durability	poor
Floating	no	Standard	---
Melting temperature	---	Water absorption	absorb 10%
UV resistance	poor	Dry and wet conditions	identical wet and dry conditions

3 STRAND

Diameter 6 - 30 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
6	3/4	2.49	0.3	2.6
8	1	4.44	0.5	4.5
9	1 1/8	5.61	0.6	5.7
10	1 1/4	6.93	0.7	6.9
12	1 1/2	9.98	1.0	9.9
14	1 3/4	13.60	1.4	13.3
16	2	17.70	1.8	17.2
18	2 1/4	22.50	2.2	21.6
20	2 1/2	27.70	2.7	26.5
22	2 3/4	33.50	3.3	31.9
24	3	39.90	3.9	37.8
26	3 1/4	46.80	4.5	44.2
28	3 1/2	54.30	5.2	51.0
30	3 3/4	62.40	5.9	58.3

Spliced Termination: -10% / BL is in accordance with ISO 2307

4 STRAND

Diameter 10 - 30 mm

Diameter mm	Circ. inch	Weight kg/100 m	BL t	BL kN
10	1 1/4	6.93	0.6	6.2
12	1 1/2	9.98	0.9	8.9
14	1 3/4	13.60	1.2	12.0
16	2	17.70	1.6	15.5
18	2 1/4	22.50	2.0	19.4
20	2 1/2	27.70	2.4	23.9
22	2 3/4	33.50	2.9	28.7
24	3	39.90	3.5	34.0
26	3 1/4	46.80	4.1	39.8
28	3 1/2	54.30	4.7	45.9
30	3 3/4	62.40	5.4	52.5

Spliced Termination: -10% / BL is in accordance with ISO 2307

APPLICATION

/ Fishing ropes / Auxiliary ropes / Mooring ropes / Towing ropes

TECHNICAL PARAMETERS

RELATIVE STRENGTH

Represents the overall strength (in Newtons, formerly in grams) of a rope under tension based on the material type of rope – split film, fibre, monofilament (measured in dtex, formerly in deniers). This allows for individual materials to be compared with one another.

MELTING TEMPERATURE

This is one of the basic physical characteristics of synthetic materials. Under the influence of heat, synthetic materials can undergo irreversible changes (surface fabric can start to glaze). It is important to keep in mind that rope should not be stored near sources of heat, because it could lead to changes in the underlying strength of the rope.

MAXIMUM LONG-TERM-USE TEMPERATURE

Refers to the temperature which, over the long term, doesn't damage the product, but which could lead to changes in key technical parameters.

WORKING LOAD

It is important to differentiate between the maximum breaking strength of a rope, and its working load. Working load is the absolute maximum strain that can be put on a rope. This is based on a given safety coefficient. When working with a modified rope, to lift a load for example, we have to respect the rope's given safety factor, which will in turn give us the rope's working load.
For example: a load-lifting rope with a minimum strength of 1,000 kg and a safety factor of 7:1, has a working load of 143 kg.

UV RADIATION RESISTANCE

UV radiation causes textile materials to lose strength. Synthetic and natural materials vary in their resistance to UV radiation, or sunlight. Some materials, especially polyolefins, require UV stabilization. According to applicable standards, PP rope stabilized at 100 kLy should lose no more than 50% of its strength after being exposed for a year to 100 kLy of UV intensity. Stabilization can negatively affect rope strength. Our POLYS SunFix ropes are protected even under very high intensities of sunlight. PP multifilament fibre ropes are very resistant to UV radiation.

ABRASION RESISTANCE

This is important for the strength of the rope, and for judging the condition of the rope during use. It shows how resistant a given rope is to the abrasion caused by sharp edges.

PACKAGING OF MARINE ROPES

Ropes are delivered in coils, minicoils, hanks and plastic spools.

FACTORS INFLUENCING ROPE STRENGTH

- rope construction
- rope abrasion – scratched surface fibres can lead to decreasing strength
- chemicals – the strength of ropes made from materials that are not resistant to certain chemicals can be significantly affected – store your ropes away from all chemicals!
- heat – see the table of characteristics – store ropes away from heat sources!
- sun (UV radiation) – store the ropes away from direct sunlight!
- shock load
- splicing – reduces rope strength by about 10%, splicing must be done very carefully
- knots – reduce rope strength around 50% (up to 90% in steel ropes)

PURPOSE OF USE

	Rope construction	Marine transport - mooring lines	Marine transport - towing lines	Marine transport - auxiliary lines	Yachts and boats	Fishing and fish farming	Transportation cargo hadling
HMPE	braided 12 strand	•••	•••				
	braided 8 strand	•••	•••				
TITAN PLUS	braided 12 strand	•••	•••				
	braided 8 strand	•••	•••				
TITAN	braided 12 strand	•••	•••				
	braided 8 strand	•••	•••				
CRUISER PLUS	braided 12 strand	•••	•••				
	braided 8 strand	•••	•••				
CRUISER	braided 12 strand	•••	•••				
	braided 8 strand	••	••				
	twisted 3 and 4 strand	••	••	•••		•••	
POLYAMIDE	braided 12 strand	•••	•••				
	braided 8 strand	•••	•••	•	•••		
	twisted 3 and 4 strand	••	••	••	•••		••
POLYESTER	braided 12 strand	•••	•••				
	braided 8 strand	•••	•••	•	•••		••
	twisted 3 and 4 strand	••	••	•••	•••	••	•••
POLYS	braided 12 strand	••	••				
	braided 8 strand	••	••	••		•••	
	twisted 3 and 4 strand	•	•	•••		•••	••
POLYPROPYLENE PPM	braided 12 strand	••					
	braided 8 strand	••	•		•••		
	twisted 4 and 3 strand	••		•••	•••	•	••
POLYPROPYLENE	braided 12 strand	•	•				
	braided 8 strand	•	•	•		•	
	twisted 4 and 3 strand	•	•	•••	••	••	•••

••• most suitable for this application •• suitable for this application • useable for this application

ROPE STRENGTH

Rope strength is an important basic characteristic and is measured in N (Newtons) at the point of rupture. Strength can also be measures in kN and daN (kilo-Newtons and deca-Newton (1 kg = 0.981 daN).

Maximum strength is in accordance with accepted European standards:

- EN ISO 1346 – PP split film and PP Multitex
- EN ISO 10572 – Polysteel
- EN ISO 1140 – Polyamid
- EN ISO 1141 – Polyester
- EN ISO 10556 – Polyester/polyolefin dual fibres
- EN ISO 10325 – HMPE

The maximum strength of non-standard ropes is determined on the basis of our own laboratory measurements, and testing equipment certified and controlled by Germanischer Lloyd.

CARE OF ROPES AND SAFETY OF USE

The following recommendations will assist you both to extend the service life of the ropes and also to increase the safety of use of the ropes.

1. Protect the rope against direct contact with rough surfaces, sharp edges, chemical effects and high temperatures.
2. Ropes with spliced eyes or ropes connected with splicing decrease the breaking strength only by 10% whereas knost decrease strength by 25 – 55%.
3. If possible, store the ropes in a clean and dry environment, protected from direct sunlight.
4. Avoid sharp bends of the rope when under tension, as this stresses only about half of the fibres. The minimum rope bend diameter should be six times the rope diameter.
5. The maximum abrasion of the ropes occurs in places that were exposed to friction and abrasion for a long time. Therefore it si suitable to check these places and to change the position of the rope regularly in order to provide for uniform stress. The most exposed places are those being in contact with cleats, hawse holes, pulleys, etc.
6. Never stand in the direction of the rope tension. If the rope breaks, the released energy can cause severe injuries.

MARINE ROPES - TECHNICAL PARAMETERS

PARAMETERS	HMPE	TITAN	TITAN PLUS	CRUISER PLUS	CRUISER	POLYAMIDE	POLYESTER	POLYS	PP MULTITEX	POLYPROPYLENE
Standard	EN ISO 10325	EN ISO 10556	EN ISO 10556	EN ISO 10556	EN ISO 10556	EN ISO 10440	EN ISO 10441	EN ISO 10572	EN ISO 1346	EN ISO 1346
Fiber tenacity	30.0 cN/dtex 33.98 g/den	6.5 cN/dtex 7.40 g/den	6.5 cN/dtex 7.40 g/den	6.5 cN/dtex 7.40 g/den	6.5 cN/dtex 7.40 g/den	7.23 cN/dtex 8.20 g/den	7.23 cN/dtex 8.20 g/den	6.62 cN/dtex 7.50 g/den	6.62 cN/dtex 7.50 g/den	4.25 cN/dtex 4.82 g/den
Linear density	0.97 kg/dm^3	1.15 kg/dm^3	1.14 kg/dm^3	0.99 kg/dm^3	0.99 kg/dm^3	1.14 kg/dm^3	1.38 kg/dm^3	0.92 kg/dm^3	0.91 kg/dm^3	0.91 kg/dm^3
Floating	yes	no	no	yes	yes	no	no	yes	yes	yes
Melting temperature	145 °C	260/165 °C	260/165 °C	260/165 °C	260/165 °C	215 °C	260 °C	165 °C	165 °C	165 °C
Softening temperature	135 °C	225/140 °C	225/140 °C	225/140 °C	225/140 °C	170 °C	225 °C	140 °C	140 °C	140 °C
Max temperature of use	100 °C	120 °C	120 °C	120 °C	120 °C	130 °C	180 °C	100 °C	100 °C	100 °C
Max working temperature	80 °C	100 °C	100 °C	100 °C	100 °C	100 °C	120 °C	80 °C	80 °C	80 °C
UV resistance	very good	outstanding	outstanding	outstanding	very good	very good	outstanding	good	average	average
Abrasion resistance	very good	outstanding	outstanding	outstanding	very good	very good	outstanding	good	good	average

RESISTANCE OF ROPES

	HMPE	TITAN / TITAN PLUS CRUISER / CRUISER PLUS	POLYS	PP MULTITEX	POLYPROPYLENE	POLYAMIDE	POLYESTER
Resistance to alkalis	excellent	excellent to most	excellent to most	excellent to most	excellent to most	good at low concentracion	average at room temperature
Resistance to acids	excellent	good	excellent	excellent	excellent	low at high concentracion	predominantly good
Resistance to petroleum based products	excellent	excellent	excellent	excellent	excellent	good	excellent

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