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Marine Ropes

CONTENTS

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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.

HIGH RELATIVE STRENGTH

The high strength of textile ropes isn't created by accumulating the basic material, but by the material's basic parameters. We try to limit rope weight wherever possible, and in doing so, we provide an excellent price/performance ratio in comparison to some other rope manufacturers.

TODAY'S ASSORTMENT OF ROPES, PRODUCED ON THE BASIS OF SOPHISTICATED TECHNOLOGIES WITH TOP MACHINERY, IS INTENDED ESPECIALLY FOR SHIP BUILDING INDUSTRY, FISHING INDUSTRY, TECHNICAL TEXTILE INDUSTRY (NETS), MECHANICAL ENGINEERING, BUILDING AND CONSTRUCTION INDUSTRY, AGRICULTURE, SPORTS AND ALSO FOR 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 at our modern, certified in-house testing rooms. Except standard tests the OCIMF tests of cycle loadings are made. LANEX is also certified according to ISO 9001.

LLOYDS REGISTER

DNV GL

ROSSIJSKIJ MORSKOJ REGISTR

EN ISO 9001:2009

AQAP 2110

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8 STRAND BRAIDED ROPE

TITAN PLUS ■ TITAN ■ CRUISER ■ CRUISER PLUS ■ MASTER ■ POLYS
■ PP MULTITEX ■ POLYPROPYLENE ■ POLYAMID ■ POLYESTER

TITAN PLUS

HIGHEST TENSILE STRENGTH IN COMPOSITE ROPES, INCREASED AMOUNT OF HIGH-TENACITY POLYESTER MULTIFILAMENT FIBRES ON THE SURFACE OF THE ROPE STRANDS SIGNIFICANTLY INCREASES THE ABRASION RESISTANCE.

TITAN PLUS – an advanced braided composite 8-strand 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.

TITAN PLUS is very pleasant to the feel and easy spliceable.

APPLICATIONS

- **TOWING LINES**
- **OFFSHORE LINES**
- **MOORING LINES**
- **MOORING TAILS**

PARAMETERS

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

NON-FLOATABLE ROPES

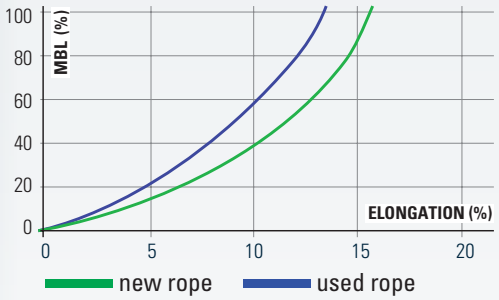
DNV GL

Complies with OCIMF (MEG 2007)

Diameter	Circ.	Weight	MBL	MBL
mm	inch	kg/100 m	t	kN
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	59.4	583.0
52	6 1/2	173.0	69.3	680.0
56	7	201.0	80.0	785.0
60	7 1/2	231.0	91.2	895.0
64	8	263.0	103.0	1 010.0
68	8 1/2	296.0	116.2	1 140.0
72	9	332.0	129.5	1 270.0
76	9 1/2	370.0	143.7	1 410.0
80	10	411.0	158.0	1 550.0
84	10 1/2	454.0	172.3	1 690.0
88	11	497.0	190.6	1 870.0
96	12	590.0	225.3	2 210.0

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

LOAD – ELONGATION CURVES FOR NEW AND USED ROPE



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TITAN

HIGH TENSILE STRENGTH AND SURFACE FULLY COVERED WITH HIGH TENACITY POLYESTER FIBRES GIVES THIS ROPE SUPERB ABRASION AND UV RESISTANCE (AS POLYESTER).

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.

APPLICATIONS

- **TOWING LINES**
- **OFFSHORE LINES**
- **MOORING LINES**
- **MOORING TAILS**

PARAMETERS

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

NON-FLOATABLE ROPES

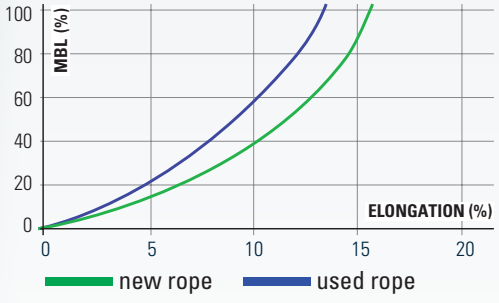
DNV GL

Complies with OCIMF (MEG 2007)

Diameter	Circ.	Weight	MBL	MBL
mm	inch	kg/100 m	t	kN
36	4 1/2	72.0	29.1	285.5
40	5	89.0	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	75.5	742.0
64	8	227.0	85.5	840.0
68	8 1/2	256.0	96.0	941.3
72	9	287.0	107.6	1 055.3
76	9 1/2	320.0	119.9	1 176.0
80	10	354.0	132.2	1 296.8
84	10 1/2	391.0	145.0	1 426.0
88	11	428.0	158.6	1 555.8
96	12	510.0	184.0	1 805.0

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

LOAD – ELONGATION CURVES FOR NEW AND USED ROPE



CRUISER

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 MBL AND WEIGHT.

Ropes especially for marine shipping industry, mooring, towing and auxiliary ropes, including mooring ropes for tankers, also can be used for production and anchoring of fishing nets, low diameter cords are suitable for longlines.

APPLICATIONS

- **TOWING LINES**
- **OFFSHORE LINES**
- **MOORING LINES**
- **MOORING TAILS**

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	very good
Abrasion resistance	very good
Durability	very good
Water absorption	max. 0.1 %
Dry and wet conditions	identical wet and dry conditions
TCLL value	78 %

Complies with OCIMF (MEG 2007)

FLOATABLE ROPES

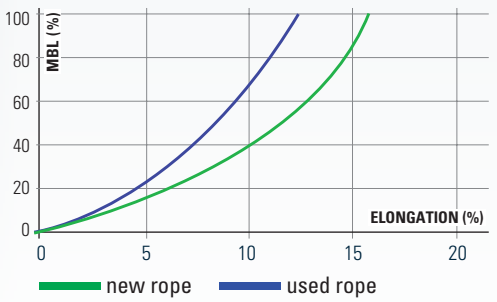
DNV GL

Lloyd's Register

Diameter	Circ.	Weight	MBL	MBL
mm	inch	kg/100 m	t	kN
18	2 1/4	16.3	7.0	68.2
20	2 1/2	21.0	8.5	83.7
22	2 3/4	25.3	10.3	100.5
24	3	28.7	12.0	118.0
26	3 1/4	33.7	14.2	139.0
28	3 1/2	39.5	16.3	159.8
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	1 089.6
80	10	319.0	121.8	1 194.0
84	10 1/2	352.6	133.5	1 311.0
88	11	386.1	145.7	1 428.0
90	11 1/4	406.0	151.4	1 485.0
96	12	458.7	171.4	1 680.0

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

LOAD – ELONGATION CURVES FOR NEW AND USED ROPE



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CRUISER PLUS

VERY HIGH TENSILE STRENGTH ROPE IN COMPARISON WITH STANDARD ROPES, WHICH ALLOWS TO USE ROPES WITH SMALLER DIAMETERS WHICH REQUIRE LESS STORAGE SPACE.

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.

APPLICATIONS

- **TOWING LINES**
- **OFFSHORE LINES**
- **MOORING LINES**
- **MOORING TAILS**

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 %

Complies with OCIMF (MEG 2007)

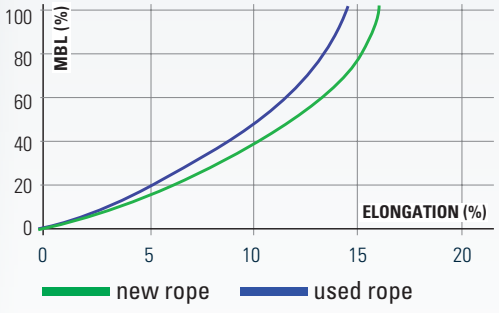
FLOATABLE ROPES

DNV GL

Diameter	Circ.	Weight	MBL	MBL
mm	inch	kg/100 m	t	kN
32	4	68.5	28.4	278.0
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	1 025.0
72	9	267.0	115.8	1 135.0
76	9 1/2	315.0	134.1	1 315.0
80	10	348.0	147.7	1 448.0
84	10 1/2	381.5	157.0	1 540.0
88	11	415.0	182.6	1 790.0
96	12	489.0	205.4	2 014.0
104	13	563.0	228.0	2 235.0

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

LOAD – ELONGATION CURVES FOR NEW AND USED ROPE



MASTER

CLASSIC COMPOSITE ROPE FORMED BY HIGH-TENACITY PP SPLIT FILM IN COMBINATION WITH PES MULTIFILAMENT FIBRE.THANKS TO PES FIBRE ON THE SURFACE OF INDIVIDUAL STRANDS, THE ROPE GAINS AN IMPROVED ABRASION RESISTANCE ON ROUGH SURFACES AND EDGES DURING ITS ENTIRE SERVICE LIFE.

MASTER is a composite rope of a new generation formed by high-tenacity PP split film in combination with PES multifilament fibre. Thanks to PES fibre on the surface of individual strands, the rope gains an improved abrasion resistance on rough surfaces and edges during its entire service life. The rope is permanently floatable on water and retains its strength even in wet conditions.

APPLICATIONS

- **TOWING LINES**
- **MOORING LINES**

PARAMETERS

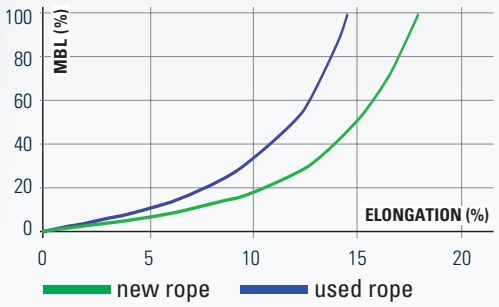
Material	PES high tenacity multifilament and PP fibres
Specific Gravity	0.99 kg/dm^3
Floating	yes
Melting temperature	260/165 °C
UV resistance	very good
Abrasion resistance	very good
Durability	very good
Water absorption	max. 0.1 %
Dry and wet conditions	identical wet and dry conditions

Complies with OCIMF (MEG 2007)

Diameter	Circ.	Weight	MBL	MBL
mm	inch	kg/100 m	t	kN
36	4 1/2	64.4	24.1	236.0
40	5	79.2	29.2	286.0
44	5 1/2	96.8	35.0	343.0
48	6	114.4	41.4	406.0
52	6 1/2	134.2	48.0	471.0
56	7	156.2	55.0	539.0
60	7 1/2	179.3	62.8	616.0
64	8	203.5	71.1	697.0
68	8 1/2	231.0	79.7	781.0
72	9	257.4	89.4	876.0
76	9 1/2	275.1	99.6	976.0
80	10	319.0	109.9	1 077.0
84	10 1/2	352.6	120.0	1 185.0
88	11	386.1	131.8	1 292.0
96	12	458.7	155.7	1 526.0

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

LOAD – ELONGATION CURVES FOR NEW AND USED ROPE



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POLYS

MODERN MATERIAL ROPE WITH VERY GOOD STRENGTH AND ABRASION RESISTANCE, VERY GOOD RESISTANCE TO CHEMICALS, EASY MAINTENANCE, WIDE RANGE OF COLORS, NOT HARMFUL TO HEALTH.

Ropes especially for marine shipping industry, for fishing industry and also for those industries where low weight and high strength is required.

APPLICATIONS

- **TOWING LINES**
- **MOORING LINES**
- **FISHING LINES**

PARAMETERS

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

FLOATABLE ROPES

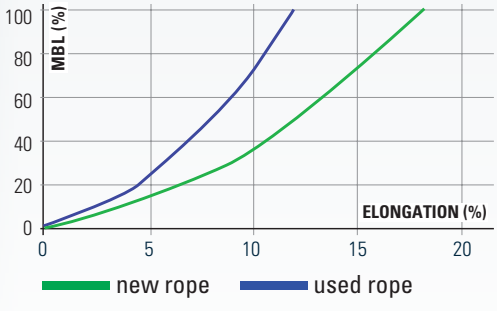
DNV GL

Lloyd's Register

Diameter	Circ.	Weight	MBL	MBL
mm	inch	kg/100 m	t	kN
16	2	11.6	5.1	49.6
18	2 1/4	14.7	6.4	62.3
20	2 1/2	18.1	7.8	76.4
22	2 3/4	21.9	9.4	91.8
24	3	26.1	11.1	109.2
26	3 1/4	30.6	13.1	128.1
28	3 1/2	35.5	15.0	147.0
30	3 3/4	40.8	17.1	168.0
32	4	46.4	19.1	187.0
36	4 1/2	58.7	23.7	232.4
40	5	72.5	29.3	287.7
44	5 1/2	87.7	35.0	343.4
48	6	104.0	41.4	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	1 074.5
84	10 1/2	320.5	116.0	1 137.0
88	11	351.0	122.4	1 200.2
96	12	417.0	144.6	1 417.5

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

LOAD – ELONGATION CURVES FOR NEW AND USED ROPE



PP MULTITEX

PP HIGH TENACITY FIBRES / VERY GOOD STRENGTH AND ABRASION RESISTANCE, FLOATING ON WATER, VERY GOOD RESISTANCE TO CHEMICALS, SOFT TO THE TOUCH, VERY GOOD KNOTABILITY, EASY MAINTENANCE, WIDE RANGE OF COLORS, NOT HARMFUL TO HEALTH.

Rope for general use, wide utilization in marine transportation, fishing industry, ropes for water sports, for apparel and sportgear and leisure time products industry.

APPLICATIONS

- **TOWING LINES**
- **MOORING LINES**
- **FISHING LINES**

PARAMETERS

Material	PP Multitex
Specific Gravity	0.91 kg/dm^3
Floating	yes
Melting temperature	165 °C
UV resistance	average
Abrasion resistance	good
Durability	good
Standard	ISO EN 1346 PP3
Water absorption	max. 0.1 %
Dry and wet conditions	identical wet and dry conditions

FLOATABLE ROPES

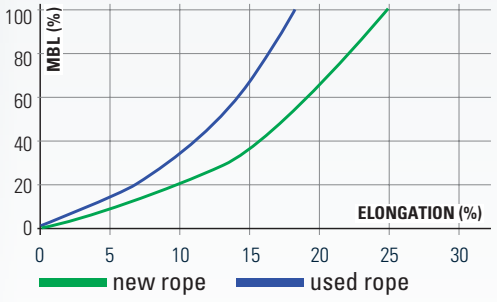
DNV GL

Lloyd's Register

Diameter	Circ.	Weight	MBL	MBL
mm	inch	kg/100 m	t	kN
16	2	11.6	4.0	38.9
18	2 1/4	14.6	5.0	49.4
20	2 1/2	18.1	6.1	59.9
22	2 3/4	21.9	7.5	73.5
24	3	26.0	8.8	86.1
26	3 1/4	30.6	10.2	99.8
28	3 1/2	35.4	11.7	114.5
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	94.0	920.0
88	11	350.0	103.0	1 010.0
96	12	417.0	121.4	1 190.0

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

LOAD – ELONGATION CURVES FOR NEW AND USED ROPE



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POLYPROPYLENE

EXCELLENT RESISTANCE TO CHEMICALS, FLOATING ON WATER, HARD TO THE TOUCH, EASY MAINTENANCE, NOT HARMFUL TO HEALTH.

Rope for general use, wide utilization in marine transportation, fishing, industry and agriculture.

APPLICATIONS

- **TOWING LINES**
- **MOORING LINES**
- **FISHING LINES**

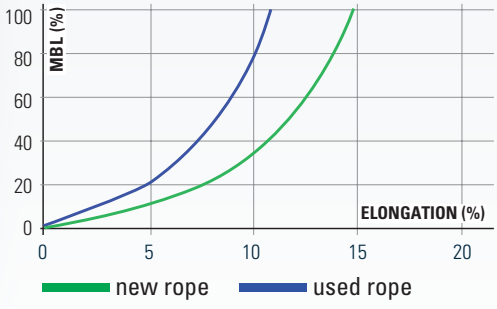
PARAMETERS

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 PP2
Water absorption	max. 0.1 %
Dry and wet conditions	identical wet and dry conditions

Diameter	Circ.	Weight	MBL	MBL
mm	inch	kg/100 m	t	kN
16	2	11.6	4.2	40.7
18	2 1/4	14.6	5.3	51.9
20	2 1/2	18.1	6.4	62.6
22	2 3/4	21.9	7.7	75.0
24	3	26.0	8.9	87.7
26	3 1/4	30.6	10.3	101.4
28	3 1/2	35.4	11.8	115.5
30	3 3/4	40.7	13.5	132.0
32	4	46.3	15.3	150.1
36	4 1/2	58.6	19.1	187.0
40	5	72.3	23.3	228.5
44	5 1/2	87.5	28.5	279.5
48	6	104.0	33.5	328.9
52	6 1/2	122.0	38.9	381.8
56	7	142.0	44.7	438.2
60	7 1/2	163.0	50.8	498.0
64	8	185.0	57.2	561.2
68	8 1/2	210.0	64.3	630.2
72	9	234.0	71.3	699.2
76	9 1/2	262.0	79.1	775.1
80	10	289.0	86.7	850.0
84	10 1/2	320.0	94.0	920.0
88	11	350.0	102.0	1 000.0
96	12	417.0	120.4	1 180.0
104	13	489.0	138.7	1 360.0
110	13 3/4	548.0	146.9	1 440.0

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

LOAD – ELONGATION CURVES FOR NEW AND USED ROPE



POLYAMID

NYLON 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 resistence to different weather conditions.

APPLICATIONS

- **TOWING LINES**
- **MOORING LINES**
- **FISHING LINES**

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 1140
Water absorption	4 %
Dry and wet conditions	Strength declines 10 % when wet
TCLL value	55 %

Complies with OCIMF (MEG 2007)

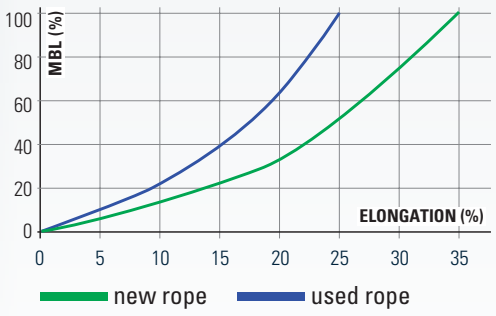
NON-FLOATABLE ROPES

DNV GL

Diameter	Circ.	Weight	MBL	MBL
mm	inch	kg/100 m	t	kN
16	2	16.0	5.4	53.0
18	2 1/4	20.0	6.6	64.3
20	2 1/2	25.0	8.2	80.0
22	2 3/4	29.9	9.6	94.0
24	3	36.0	11.4	112.0
26	3 1/4	41.7	13.2	129.0
28	3 1/2	49.0	15.3	150.0
30	3 3/4	56.0	17.3	170.0
32	4	64.0	20.4	200.0
36	4 1/2	81.0	25.5	250.0
40	5	100.0	30.6	300.0
44	5 1/2	121.0	36.2	355.0
48	6	144.0	43.4	425.0
52	6 1/2	170.0	51.0	500.0
56	7	197.0	57.1	560.0
60	7 1/2	226.0	64.3	630.0
64	8	257.0	72.4	710.0
68	8 1/2	286.5	81.4	798.0
72	9	325.0	91.8	900.0
76	9 1/2	357.0	100.5	985.0
80	10	401.0	114.2	1 120.0
84	10 1/2	443.5	124.0	1 220.0
88	11	486.0	134.6	1 320.0
96	12	578.0	163.2	1 600.0

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

LOAD – ELONGATION CURVES FOR NEW AND USED ROPE



Lanex
You can be sure

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.

APPLICATIONS

- TOWING LINES
- OFFSHORE LINES
- MOORING LINES
- MOORING TAILS

PARAMETERS

Material	PES multifilament fibres
Specific Gravity	1.38 kg/dm³
Floating	no
Melting temperature	260 °C
UV resistance	outstanding
Abrasion resistance	outstanding
Durability	very good
Manipulation	good
Standard	ISO EN 1141
Water absorption	max. 0.5 %
Dry and wet conditions	identical wet and dry conditions

Complies with OCIMF (MEG 2007)

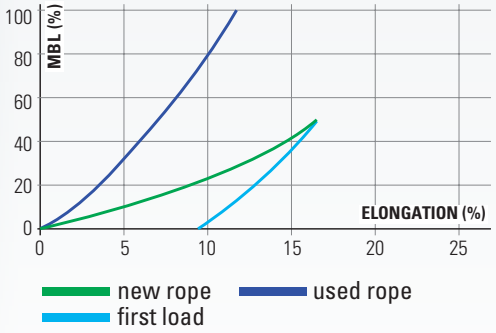
NON-FLOATABLE ROPES

DNV GL

Diameter	Circ.	Weight	MBL	MBL
mm	inch	kg/100 m	t	kN
16	2	19.4	5.5	54.0
18	2 1/4	24.6	6.8	67.0
20	2 1/2	30.4	8.7	85.0
22	2 3/4	36.7	10.2	100.0
24	3	43.7	12.2	120.0
26	3 1/4	51.2	14.4	141.0
28	3 1/2	59.5	16.8	165.0
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	64.2	630.0
60	7 1/2	273.0	78.5	770.0
64	8	311.0	87.7	860.0
68	8 1/2	352.0	94.9	931.0
72	9	393.0	102.4	1005.0
80	10	486.0	120.0	1177.0
84	10 1/2	537.0	128.4	1260.0
88	11	588.0	137.6	1350.0
96	12	699.0	155.2	1523.0

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

LOAD – ELONGATION CURVES FOR NEW AND USED ROPE



MOORING TAILS

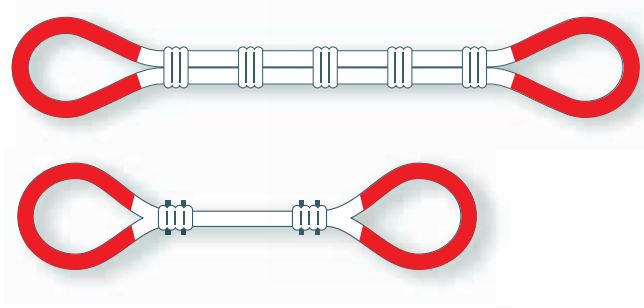
MOORING TAILS PROVIDE ELASTICITY AND SHOCK/ENERGY ABSORBING WITHIN THE MOORING ARRANGEMENT AND PREVENT DAMAGES TO PRIMARY MOORING LINE. USED ESPECIALLY IN COMBINATION WITH STEEL OR UHMWPE ROPES IN MOORING, TOWING AND OFFSHORE APPLICATIONS.

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

STANDARD LENGTHS PRODUCED

For ringtails: 22 m effective working length with 2 protected eyes of 2 m and 5 fixing points on this length. MBL of ringtail is 1.6 x higher than MBL of single leg mooring tail.

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



MATERIALS

COMPOSITE

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.
MBL 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 required MBL 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 MBL and weight.

Diameter	Weight of rope with eyes [kg] ± 5 %		Strength MBL	
mm	11 m	22 m	t	kN
40	12.5	22.0	33.5	328.8
44	15.4	26.5	40.0	392.4
48	18.7	32.0	47.1	462.0
52	22.0	37.5	54.8	537.6
56	25.5	43.5	62.9	616.8
60	29.3	50.0	71.4	699.6
64	33.3	56.7	80.4	788.4
68	39.0	65.5	90.2	884.4
72	43.4	73.0	100.4	984.0
76	48.5	81.8	111.1	1089.6
80	54.0	90.5	121.8	1194.0
88	65.0	109.5	145.7	1428.0
96	77.2	130.0	171.4	1680.0

Spliced Termination: -10 % / MBL is 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 MBL/weight ratio
- increased amount of high-tenacity polyester multifilament fibres on the surface of the rope strands significantly increases the abrasion resistance

Diameter	Weight of rope with eyes [kg] ± 5 %		Strength MBL	
mm	11 m	22 m	t	kN
40	15.5	26.4	42.5	417.0
44	17.9	30.6	49.2	482.0
48	21.1	35.6	55.7	546.0
52	24.6	41.5	62.5	613.0
56	27.9	47.0	72.7	713.0
60	31.3	52.9	81.2	796.0
64	34.8	58.7	90.4	886.0
68	41.8	69.7	104.6	1025.0
72	45.4	75.7	115.8	1135.0
76	53.5	89.3	134.1	1315.0
80	59.2	98.7	147.7	1448.0
88	70.5	117.7	182.6	1790.0
96	83.1	138.6	205.4	2014.0
104	95.7	159.6	228.0	2235.0

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

MATERIALS

NON-FLOATABLE ROPES

NYLON / POLYAMID

Advantage is extra shock absorption, high elongation (25 % at break) and excellent UV protection.
As per OCIMF regulation required MBL must be 37 % higher than steel rope.

Diameter	Weight of rope with eyes [kg] ± 5 %		Strength MBL	
mm	11 m	22 m	t	kN
40	17.3	30.0	30.6	300.0
44	20.1	36.2	36.2	355.0
48	25.7	43.9	43.4	425.0
52	30.3	51.9	51.0	500.0
56	35.1	60.1	57.1	560.0
60	40.3	68.9	64.3	630.0
64	45.8	78.4	72.4	710.0
68	52.7	89.0	81.4	798.0
72	59.8	100.9	91.8	900.0
76	65.7	110.8	100.5	985.0
80	73.8	124.5	114.2	1120.0
88	89.4	151.0	134.6	1320.0
96	106.4	179.5	163.2	1600.0

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

EYE SPLICING

8-Strand Tuck Splice Method 1 and 2:
8-strand ropes are made in whole or in part from any of the following high modulus fibres: polypropylene, polysteel, Multitex (polypropylen technical fibres), polyester, nylon or combination of these fibres.

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.

Eye splicing method 1 **Eye splicing method 2**

NON-FLOATABLE ROPES

TITAN

- surface of the rope strands is fully covered with high-tenacity polyester multifilament fibres which lend unique abrasion resistance to the rope strands and significantly increase the abrasion resistance of the whole rope
- superior abrasion, UV and chemical resistance (surface is fully covered with PES)
- better MBL compared to PES

Diameter	Weight of rope with eyes [kg] ± 5 %		Strength MBL	
mm	11 m	22 m	t	kN
40	14.0	24.2	35.9	351.8
44	16.9	29.2	43.0	421.8
48	20.7	33.7	50.0	490.0
52	24.4	41.8	57.8	567.0
56	28.2	48.2	66.2	649.3
60	32.4	55.4	75.7	742.0
64	37.0	63.2	85.7	840.0
68	43.0	72.6	96.0	941.3
72	48.2	81.4	107.6	1055.3
76	53.8	90.7	120.0	1176.0
80	59.5	100.4	132.2	1296.8
84	65.7	111.0	145.3	1426.0
88	72.0	121.4	158.7	1555.8
96	85.7	144.6	184.0	1805.0

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

NON-FLOATABLE ROPES

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

Diameter	Weight of rope with eyes [kg] ± 5 %		Strength MBL	
mm	11 m	22 m	t	kN
40	17.0	29.5	42.8	420.0
44	19.6	33.9	50.3	493.0
48	24.1	41.2	59.4	583.0
52	28.2	48.2	69.3	680.0
56	32.7	56.0	80.0	785.0
60	37.6	64.3	91.2	895.0
64	42.8	73.2	103.0	1010.0
68	49.8	84.0	116.2	1140.0
72	55.8	94.2	129.5	1270.0
76	62.2	105.0	143.7	1410.0
80	69.1	116.6	158.0	1550.0
84	76.3	129.0	172.3	1690.0
88	83.5	141.0	190.6	1870.0
96	99.2	167.3	225.3	2210.0

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

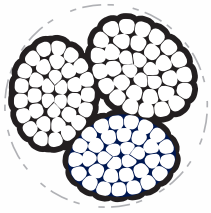
3 AND 4 STRAND TWISTED ROPES

PP MULTITEX ■ POLYS ■ POLYPROPYLENE ■ POLYESTER ■ POLYAMID
■ CRUISER ■ SISAL ■ SPLEITEX

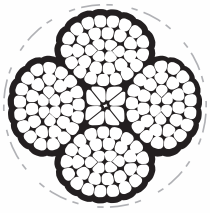
PP MULTITEX

PP HIGH TENACITY FIBRES / VERY GOOD STRENGTH AND ABRASION RESISTANCE, FLOATING ON WATER, VERY GOOD RESISTANCE TO CHEMICALS, SOFT TO THE TOUCH, VERY GOOD KNOTABILITY, EASY MAINTENANCE, WIDE RANGE OF COLORS, NOT HARMFUL TO HEALTH.

TYPE A
dia
3 – 36 mm



TYPE B
dia
10 – 36 mm



APPLICATIONS

- FISHING ROPES
- AUXILIARY ROPES
- MOORING ROPES
- TOWING ROPES

PARAMETERS

Material	PP Multitex
Specific Gravity	0.91 kg/dm³
Floating	yes
Melting temperature	165 °C
UV resistance	average
Abrasion resistance	good
Durability	good
Standard	ISO EN 1346 PP3
Water absorption	max. 0.1 %
Dry and wet conditions	identical wet and dry conditions

FLOATABLE ROPES

DNV GL

TYPE A	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	3	1/3	0.50	0.2	1.8
	4	1/2	0.72	0.3	3.2
	6	3/4	1.63	0.7	6.7
	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

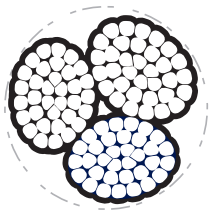
TYPE B	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	10	1 1/4	4.52	1.6	16.0
	12	1 1/2	6.51	2.3	22.4
	14	1 3/4	8.86	3.1	30.0
	16	2	11.60	3.8	37.5
	18	2 1/4	14.60	4.8	47.5
	20	2 1/2	18.10	6.1	60.0
	22	2 3/4	21.90	7.2	71.0
	24	3	26.00	8.2	80.0
	26	3 1/4	30.60	9.7	95.0
	28	3 1/2	35.40	10.8	106.0
	30	3 3/4	40.70	12.7	125.0
	32	4	46.30	14.3	140.0
	36	4 1/2	58.60	17.3	170.0

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

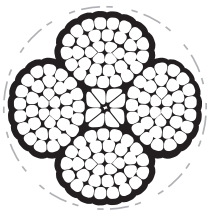
POLYS

MODERN MATERIAL ROPE WITH VERY GOOD STRENGTH AND ABRASION RESISTANCE, VERY GOOD RESISTANCE TO CHEMICALS, EASY MAINTENANCE, WIDE RANGE OF COLORS, NOT HARMFUL TO HEALTH.

TYPE A
dia
3 – 40 mm



TYPE B
dia
6 – 40 mm



APPLICATIONS

- **FISHING ROPES**
- **AUXILIARY ROPES**
- **MOORING ROPES**
- **TOWING ROPES**

PARAMETERS

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

FLOATABLE ROPES

DNV GL

TYPE A	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	3	1/3	0.55	0.3	2.6
	4	1/2	0.80	0.4	4.0
	6	3/4	1.63	0.8	8.3
	8	1	2.90	1.4	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	16.0	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	23.7	232.4
	38	4 3/4	65.20	26.2	256.9
	40	5	72.50	27.9	274.0

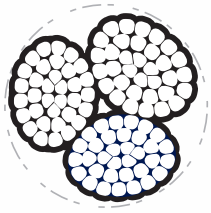
TYPE B	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	6	3/4	1.63	0.84	8.2
	8	1	2.9	1.24	12.3
	10	1 1/4	4.53	1.9	18.5
	12	1 1/2	6.52	2.4	24.8
	14	1 3/4	8.88	3.6	35.0
	16	2	11.6	4.4	43.3
	18	2 1/4	14.7	5.3	53.1
	20	2 1/2	18.1	6.6	65.2
	22	2 3/4	21.9	7.9	77.4
	24	3	26.1	9.1	89.6
	26	3 1/4	30.6	11.7	114.7
	28	3 1/2	35.5	14.3	140.0
	30	3 3/4	40.8	16.8	165.0
	32	4	46.4	15.2	148.8
	36	4 1/2	58.7	19.0	186.3
	38	4 3/4	65.2	21.0	206.0
	40	5	72.5	23.0	226.3

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

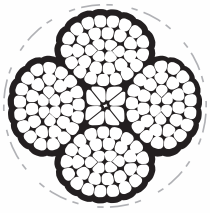
POLYPROPYLENE

EXCELLENT RESISTANCE TO CHEMICALS, FLOATING ON WATER, HARD TO THE TOUCH, EASY MAINTENANCE, NOT HARMFUL TO HEALTH.

TYPE A
dia
2.5 – 40 mm



TYPE B
dia
4 – 40 mm



APPLICATIONS

- **FISHING ROPES**
- **AUXILIARY ROPES**
- **MOORING ROPES**
- **TOWING ROPES**

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 PP2
Water absorption	max. 0.1 %
Dry and wet conditions	identical wet and dry conditions

FLOATABLE ROPES

DNV GL

TYPE A	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	2.5	1/3	0.40	0.2	2.0
	4	1/2	0.72	0.4	3.8
	6	3/4	1.63	0.7	7.0
	8	1	2.89	1.2	11.6
	10	1 1/4	4.52	1.8	17.2
	12	1 1/2	6.51	2.5	24.2
	14	1 3/4	8.86	3.3	32.4
	16	2	11.60	4.2	41.4
	18	2 1/4	14.60	5.3	51.9
	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
	36	4 1/2	58.60	19.1	187.0
	40	5	72.30	23.3	228.5

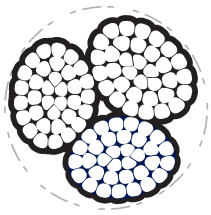
TYPE B	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	4	1/2	0.72	0.5	4.5
	6	3/4	1.63	0.7	6.8
	8	1	3.00	1.0	9.7
	10	1 1/4	4.52	1.6	15.2
	12	1 1/2	6.51	2.2	21.5
	14	1 3/4	8.86	3.0	29.6
	16	2	11.60	3.7	36.6
	18	2 1/4	14.60	5.1	49.6
	20	2 1/2	18.10	5.7	56.3
	22	2 3/4	21.90	6.9	67.5
	24	3	26.00	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	72.30	18.8	184.0

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

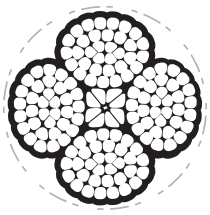
POLYESTER

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.

TYPE A
dia
3 – 36 mm



TYPE B
dia
6 – 36 mm



APPLICATIONS

- **FISHING ROPES**
- **AUXILIARY ROPES**
- **MOORING ROPES**
- **TOWING ROPES**

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 1141
Water absorption	max. 0.5 %
Dry and wet conditions	identical wet and dry conditions

NON-FLOATABLE ROPES

DNV GL

TYPE A	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	3	1/3	0.50	0.2	2.0
	4	1/2	1.21	0.3	2.8
	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

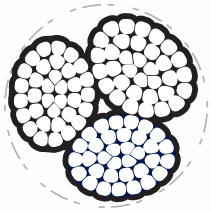
TYPE B	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	6	3/4	2.73	0.6	5.6
	8	1	4.85	1.0	9.5
	10	1 1/4	7.58	1.5	15.0
	12	1 1/2	10.90	2.2	21.2
	14	1 3/4	14.90	2.9	28.0
	16	2	19.40	3.6	35.5
	18	2 1/4	24.60	4.6	45.0
	20	2 1/2	30.30	5.7	56.0
	22	2 3/4	36.70	6.8	67.0
	24	3	43.70	8.2	80.0
	26	3 1/4	51.20	9.2	90.0
	28	3 1/2	59.40	10.8	106.0
	30	3 3/4	68.20	12.0	118.0
	32	4	77.60	13.5	132.0
	36	4 1/2	98.20	17.3	170.0

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

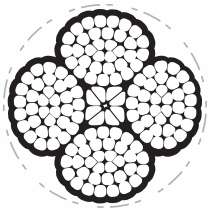
POLYAMID

NYLON ROPES, THANKS TO THEIR PROPERTIES, ARE ABLE TO ABSORB SHOCK ENERGY, HAVE EXCELLENT STRENGTH AND VERY GOOD ABRASION RESISTANCE.

TYPE A
dia
2 – 36 mm



TYPE B
dia
10 – 36 mm



APPLICATIONS

- **FISHING ROPES**
- **AUXILIARY ROPES**
- **MOORING ROPES**
- **TOWING ROPES**

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 1140
Water absorption	4 %
Dry and wet conditions	Strength declines 10 % when wet

NON-FLOATABLE ROPES

DNV GL

TYPE A	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	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	3.7
	6	3/4	2.22	0.8	8.0
	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

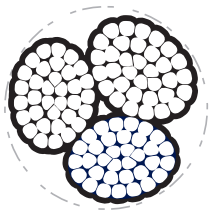
TYPE B	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	10	1 1/4	6.17	1.9	19.0
	12	1 1/2	8.88	2.9	28.0
	14	1 3/4	12.10	3.6	35.5
	16	2	15.80	4.8	47.5
	18	2 1/4	20.00	5.7	56.0
	20	2 1/2	24.70	7.2	71.0
	22	2 3/4	29.90	8.7	85.0
	24	3	35.50	10.2	100.0
	26	3 1/4	41.70	12.0	118.0
	28	3 1/2	48.40	13.5	132.0
	30	3 3/4	55.50	15.3	150.0
	32	4	63.20	17.3	170.0
	36	4 1/2	80.00	21.6	212.0

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

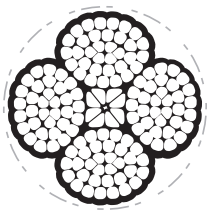
CRUISER

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.

TYPE A
dia
4 – 40 mm



TYPE B
dia
4 – 32 mm



APPLICATIONS

- **FISHING ROPES**
- **AUXILIARY ROPES**
- **MOORING ROPES**
- **TOWING ROPES**

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	very good
Abrasion resistance	very good
Durability	very good
Water absorption	max. 0.1 %
Dry and wet conditions	identical wet and dry conditions

FLOATABLE ROPES

DNV GL

TYPE A	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	4	1/2	0.9	0.4	4.1
	6	3/4	1.9	0.9	8.5
	8	1	3.3	1.5	14.6
	10	1 1/4	5.0	2.3	22.5
	12	1 1/2	7.2	3.2	31.8
	14	1 3/4	9.9	4.3	42.5
	16	2	12.7	5.5	54.4
	18	2 1/4	16.3	6.9	68.1
	20	2 1/2	19.8	8.4	82.8
	22	2 3/4	24.2	10.1	98.9
	24	3	28.6	11.8	116.0
	26	3 1/4	33.6	13.6	133.8
	28	3 1/2	39.1	15.7	153.8
	30	3 3/4	44.6	17.9	175.0
	32	4	50.6	20.0	196.3
	36	4 1/2	63.8	23.0	225.0
	40	5	78.5	27.0	265.0

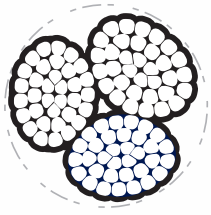
TYPE B	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	4	1/2	1.1	0.4	4.0
	6	3/4	2.0	0.9	9.0
	8	1	3.3	1.4	14.0
	10	1 1/4	5.0	2.2	22.0
	12	1 1/2	7.2	3.1	30.0
	14	1 3/4	9.9	4.3	42.0
	16	2	12.7	5.5	54.0
	18	2 1/4	16.3	6.9	68.0
	20	2 1/2	19.8	8.3	81.0
	22	2 3/4	24.2	9.6	94.0
	24	3	28.6	10.9	107.0
	26	3 1/4	33.6	12.2	120.0
	28	3 1/2	39.1	13.6	133.0
	30	3 3/4	44.6	14.9	146.0
	32	4	50.6	16.3	160.0

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

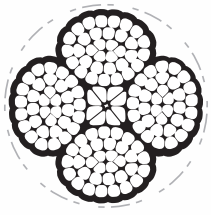
SISAL

THE HARD FIBRE ROPE ARE 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).

TYPE A
dia
6 – 30 mm



TYPE B
dia
10 – 30 mm



APPLICATIONS

- **ENGINEERING**
- **DIY SECTOR**

PARAMETERS

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

NON-FLOATABLE ROPES

TYPE A	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	6	3/4	24.9	0.3	2.58
	8	1	44.4	0.5	4.5
	10	1 1/4	69.3	0.7	6.93
	12	1 1/2	99.8	1.0	9.86
	14	1 3/4	136.0	1.4	13.3
	16	2	177.0	1.8	17.2
	18	2 1/4	225.0	2.2	21.6
	20	2 1/2	277.0	2.7	26.5
	22	2 3/4	335.0	3.3	31.9
	24	3	399.0	3.9	37.8
	26	3 1/4	468.0	4.5	44.2
	28	3 1/2	543.0	5.2	51.0
	30	3 3/4	624.0	6.0	58.3

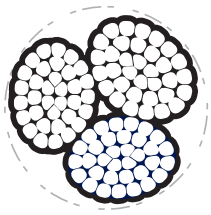
TYPE B	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	10	1 1/4	69.3	0.6	6.24
	12	1 1/2	99.8	0.9	8.87
	14	1 3/4	136.0	1.2	12.0
	16	2	177.0	1.6	15.5
	18	2 1/4	225.0	2.0	19.4
	20	2 1/2	277.0	2.4	23.9
	22	2 3/4	335.0	3.0	28.7
	24	3	399.0	3.5	34.0
	26	3 1/4	468.0	4.0	39.8
	28	3 1/2	543.0	4.7	45.9
	30	3 3/4	624.0	5.4	52.5

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

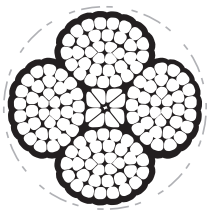
SPLEITEX

SPLEITEX IS MADE OF AN UP-TO-DATE SYNTHETIC MATERIAL THE APPEARANCE OF WHICH RESEMBLES NATURAL MATERIAL AND IS ESPECIALLY SUITABLE FOR TRADITIONAL BOATS. THANKS TO THE MATERIAL USED, SPLEITEX PROVIDES BETTER STRENGTH AND UTILITY PROPERTIES COMPARED TO ROPES MADE OF NATURAL MATERIALS.

TYPE A
dia
4 – 28 mm



TYPE B
dia
30 – 40 mm



APPLICATIONS

- **AUXILIARY ROPES**
- **DECORATIVE**

PARAMETERS

Material	PP staple fibres
Specific Gravity	0.91 kg/dm^3
Floating	yes
Melting temperature	165 °C
UV resistance	good
Abrasion resistance	averange
Durability	good
Standard	–
Water absorption	max 0.1 %
Dry and wet conditions	identical wet and dry conditions

FLOATABLE ROPES

TYPE A	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	4	1/2	10	0.3	2.8
	6	3/4	16	0.4	3.55
	8	1	28	0.6	5.95
	10	1 1/4	43	0.9	9.0
	12	1 1/2	63	1.4	13.4
	14	1 3/4	81	1.8	17.4
	16	2	104	2.2	21.8
	18	2 1/4	130	2.8	27.3
	20	2 1/2	160	3.5	34.2
	22	2 3/4	190	4.2	41.0
	24	3	230	4.9	48.3
	26	3 1/4	270	5.7	56.4
	28	3 1/2	310	6.6	64.7

TYPE B	Diameter	Circ.	Weight	Strength MBL	
	mm	inch	kg/100 m	t	kN
	30	3 3/4	350	7.4	73.0
	32	4	400	8.2	80.0
	36	4 1/2	586	10.7	105.0
	40	5	740	11.7	115.0

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

TECHNICAL PARAMETERS

PACKAGING ■ FACTORS INFLUENCING ROPE STRENGTH ■ ROPE STRENGTH ■ PURPOSE OF USE ■ CARE OF ROPES AND SAFETY OF USE ■ TECHNICAL PARAMETERS ■ RESISTANCE ROPES

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 one.

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 5:1, has a working load of 200 kg.

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.

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.

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.

PACKAGING OF MARINE ROPES

ROPES ARE DELIVERED IN COILS, MINICOILS, HANKS AND PLASTIC SPOOLS.

Coils of marine ropes are wrapped up in black polypropylene fabric with the LANEX logo and fastened with polypropylene cords. The packaging is sewn according to dimensions of the coil and the length of rope in the coil meets the customer requirements. The coil is placed on a pallet (1200 x 800 mm). The product packaged in this way has a better stability, facilitates handling, and protects the rope against contamination.

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)

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-Newtons… 1kg = 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

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.

PURPOSE OF USE

		Marine transport – mooring ropes	Marine transport – towing ropes	Marine transport – auxiliary lines	Yachts and boats	Fishing and fish farming	Transportation cargo handing
TITAN PLUS	braided (4x2)	***	***				
TITAN	braided (4x2)	***	***				
CRUISER PLUS	braided (4x2)	***	***				
CRUISER	braided (4x2)	***	***				
MASTER	braided (4x2)	***	***				
POLYAMID	twisted 3 and 4 strand	*	*	**	***		**
	braided (4x2)	***	***	*	***		
	circle braided	**	**	*	***		*
POLYESTER	twisted 3 and 4 strand	**	**	**	***	*	***
	braided (4x2)	***	***	*	***		**
	circle braided	***	**	**	***	***	**
POLYS	twisted 3 and 4 strand	*	*	***		***	**
	braided (4x2)	***	***	**		**	
	circle braided			**		***	
	leaded					***	
POLYPROPYLEN MULTIFILAMENT	twisted 3 and 4 strand	**		***	***	*	**
	braided (4x2)	**	**		***		
	circle braided			***	***	**	
Polypropylen (split film, monofilament)	twisted 3 and 4 strand	*	*	**	**	**	**
	braided (4x2)	***	***	*		*	
	circle braided	*	*	**	**	**	

*** most suitable for this aplication ** suitable for this aplication * useable for this application

CARE OF ROPES AND SAFETY OF USE

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

MARINE ROPES – TECHNICAL PARAMETERS

Parameters	TITAN	TITAN PLUS	CRUISER PLUS	CRUISER	MASTER	PA	PES	POLYS	PP Multitex	PP split film
Standard	–	–	–	–	–	ISO EN 1140	ISO EN 1141	EN 10572	ISO EN 1346	ISO EN 1346
Input material tenacity	6.5 cN/dtex 7.40 g/den	6.5 cN/dtex 7.40 g/den	6.5 cN/dtex 7.40 g/den	6.50 cN/dtex 7.40 g/den	5.50 cN/dtex 6.24 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
Specific Gravity	1.15 kg/dm^3	1.14 kg/dm^3	0.99 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	no	no	yes	yes	yes	no	no	yes	yes	yes
Melting temperature	260/165 °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	225/140 °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	120 °C	120 °C	120 °C	120 °C	120 °C	130 °C	180 °C	100 °C	100 °C	100 °C
Max working temperature	100 °C	100 °C	100 °C	100 °C	100 °C	100 °C	120 °C	80 °C	80 °C	80 °C
UV resistance	outstanding	outstanding	outstanding	very good	very good	very good	outstanding	good	average	average
Resistance to ambient effects	very good	outstanding	outstanding	very good	very good	outstanding	outstanding	very good	good	good
Abrasion resistance	outstanding	outstanding	outstanding	very good	very good	very good	outstanding	good	good	average

CARE OF ROPES AND SAFETY OF USE

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 knots 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 is 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.

RESISTANCE OF ROPES

	POLYOLEFIN-POLYESTER MIX	POYOLEFIN MIX – POLYS	POLYPROPYLENE MULTIFILAMENT HIGH TENACITY	POLYPROPYLENE SPLIT FILM, STAPLE FIBRE	POLYAMID	POLYESTER
Resistance to alkalis	excellent to most	excellent to most	excellent to most	excellent to most	good at low concentration	average at room temperature
Resistance to acids	good	excellent	excellent	excellent	low at high concentration	predominantly good
Resistance to petroleum based products	excellent	excellent	excellent	excellent	good	excellent

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