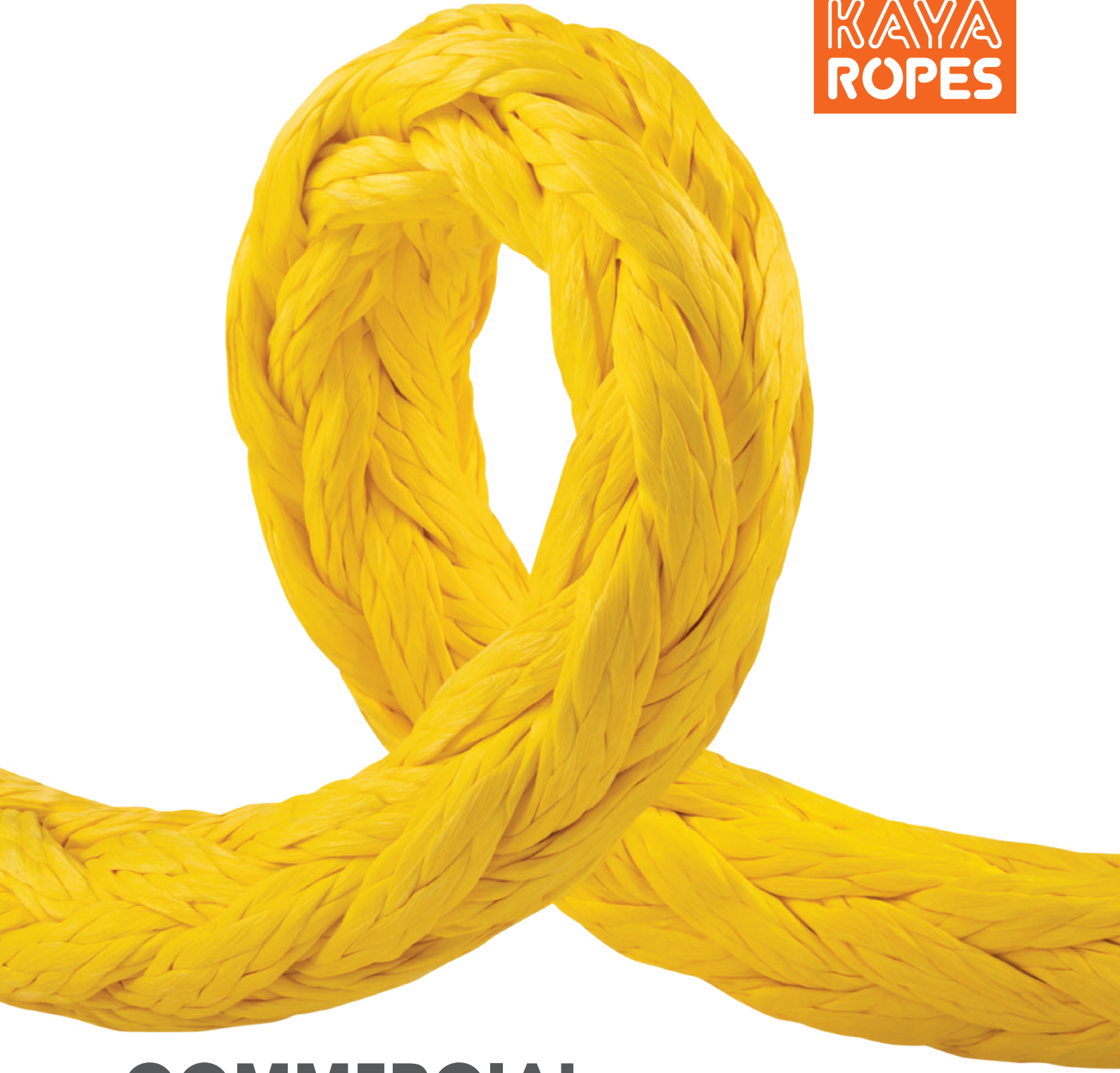




**KAYA
ROPES**

COMMERCIAL MARINE ROPES

2024 | ENG

Upgrade Your Lines



KAYA COMPANIES

www.kayacompanies.com

Kaya Companies;

A leader in its field today, Kaya Group began business in the 1980's as Kaya Construction. Kaya Group concentrates its knowledge and experience in four main areas of activity; the production of technical ropes, industrial work safety and work at height, health and safety at work training and consulting services. Since being fully aware of the dimension of social responsibility attached to the sector, the company obtains national and international certificates for all products that are developed and manufactured. By providing education and consultation services concerning the correct use of its products, the Kaya Group has gained the knowledge, experience and level of competence that have given the company the confidence and resources to be able to make new advances from a sound base. With its 40- year experience, the Kaya Group is the largest organization in the sector. In 2010, with new products, services and investments, the company is firmly on the path towards becoming an important brand in the international market.

Our Vision;

To make Kaya the undisputed world's strongest, most prestigious and trusted brand in its sector.

Mission Statement;

Our mission is to conduct research and development based on accurate analysis of needs in the sector and thereby develop new products; to employ modern machinery and a competent workforce in the manufacture of world-class, high quality goods; to provide training and consulting services to create knowledgeable workers and managers and help establish a culture of work safety in Turkey; and to provide complete solutions Via our integrated services.

Company Philosophy;

Based on the value we place on human life, our goal is to design products that will safeguard human life on the job, to manufacture such products and to raise awareness about work safety by training workers and managers and providing consultation services in this regard.

KAYA ROPES | KAYA SAFETY | KAYA RESCUE | KAYA SPORT | KAYA LIFTING
KAYA DEFENCE | KAYA TRAINING | KAYA ADVENTURE | KAYA ARCHITECTURE





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**HIGH
PERFORMANCE
ROPES**

**CONVENTIONAL
ROPES**



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PENDANTS

**SHOCK
LINES**



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SHACKLES

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GEARS**



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DYNE K®

APPLICATIONS

Vessel Primary Mooring Line
General Working Line
Tug Pendant
Tug Main Tow Line
Tug Messenger Line
Davit Rope
ETS Rope
Lifting Sling (Static)

BENEFITS / FEATURES

Superior Abrasion Resistance
Excellent Breaking Load
Buoyant
Durable
Very Low Stretch
Lightweight
Easy to Splice
Does not Kink

SPECIFICATIONS

Material	: Coated Dyneema® SK75/78
Specific Gravity	: 0,97 kg/dm ³
Construction	: 12 Strand Braided
UV Resistance	: Excellent
Chemical Resistance	: Excellent
Melting Point	: 147°C
Critical Temperature	: 65°C
Working Stretch	: <1,5%
Fiber Water Absorption	: None
Wet Abrasion	: Excellent
Dry Abrasion	: Excellent
Standard	: EN ISO 10325
Length	: Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
16	15,20	26.010	23.455	5/8"	10,21	57.222	51.601
18	19,00	32.130	29.065	3/4"	12,77	70.686	63.943
20	23,30	38.760	34.675	13/16"	15,66	85.272	76.285
22	28,00	45.900	41.300	7/8"	18,82	100.980	90.860
24	33,10	53.040	47.930	1"	22,24	116.688	105.446
26	38,60	61.200	55.065	1-1/16"	25,94	134.640	121.143
28	44,50	69.870	62.715	1-1/8"	29,90	153.714	137.973
30	50,80	79.050	71.385	1-1/4"	34,14	173.910	157.047
32	57,50	88.230	79.540	1-5/16"	38,64	194.106	174.988
34	64,60	98.430	88.720	1 3/8"	43,41	216.546	195.184
36	72,20	109.140	98.405	1-1/2"	48,52	240.108	216.491
38	80,10	119.850	108.090	1-9/16"	53,83	263.670	237.798
40	88,40	131.070	117.780	1-5/8"	59,40	288.354	259.116
42	97,00	143.310	128.980	1-11/16"	65,18	315.282	283.756
44	106,20	155.550	140.215	1-3/4"	71,37	342.210	308.473
48	125,50	181.050	163.155	2"	84,34	398.310	358.941
50	135,50	194.820	175.340	2-1/16"	91,06	428.604	385.748
52	146,40	208.590	187.630	2-1/8"	98,38	458.898	412.786
56	168,80	237.660	213.635	2-1/4"	113,43	522.852	469.997
60	192,80	268.770	241.675	2-1/2"	129,56	591.294	531.685
64	218,30	300.900	270.735	2-5/8"	146,70	661.980	595.617
68	245,30	335.070	301.330	2-3/4"	164,84	737.154	662.926
72	273,80	370.770	333.450	3"	183,99	815.694	733.590
76	303,80	408.000	367.100	3-1/8"	204,15	897.600	807.620
80	335,30	446.250	401.780	3-1/4"	225,32	981.750	883.916
88	402,80	528.360	475.190	3-5/8"	270,68	1.162.392	1.045.418
96	476,20	616.080	554.220	4"	320,01	1.355.376	1.219.284

* Spliced Break Load (All tests are in Accordance with ISO 2307)



DYNE K® 12x12

APPLICATIONS

Vessel Primary Mooring Line
General Working Line
Tug Pendants
Tug Main Tow Line
Tug Messenger Line
Davit Rope
ETS Rope
Lifting Sling (Static)

BENEFITS / FEATURES

Ultimate Abrasion Resistance
Excellent Breaking Load
Buoyant
Durable
Very Low Stretch
Lightweight
Easy to Splice
Does not Kink

SPECIFICATIONS

Material	:	Coated Dyneema® SK75/78
Specific Gravity	:	0,97 kg/dm³
Construction	:	12x12 Strand Braided
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1,5%
Fiber Water Absorption	:	None
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	-
Length	:	Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B. Load (kgf) Unspliced	Min. B. Load (kgf) Spliced	DIA (inch)	Weight (lbs/ 100ft)	Min. B. Load (lbs) Unspliced	Min. B. Load (lbs) Spliced
40	98,00	146.853	132.300	1-5/8"	65,88	323.077	291.060
44	118,00	160.950	145.000	1-3/4"	79,32	354.090	319.000
48	138,00	179.820	162.000	2"	92,77	395.604	356.400
52	168,00	216.450	195.000	2-1/8"	112,93	476.190	429.000
56	185,00	244.200	220.000	2-1/4"	124,36	537.240	484.000
60	224,00	267.510	241.000	2-1/2"	150,58	588.522	530.200
64	254,00	300.810	271.000	2-5/8"	170,74	661.782	596.200
68	283,00	333.555	300.500	2-3/4"	190,24	733.821	661.100
72	321,00	394.050	355.000	3"	215,78	866.910	781.000
76	350,00	429.015	386.500	3-1/8"	235,28	943.833	850.300
80	390,00	475.080	428.000	3-1/4"	262,17	1.045.176	941.600
84	448,00	560.550	505.000	3-1/2"	301,16	1.233.210	1.111.000
88	478,00	631.590	569.000	3-5/8"	321,32	1.389.498	1.251.800

* Spliced Break Load (All tests are in Accordance with ISO 2307)



DYNE K® 12x12 ▲ HIGH PERFORMANCE ROPES



DYNE K[®] EXTREME

APPLICATIONS

Vessel Primary Mooring Line
General Working Line
Tug Pendant
Tug Main Tow Line
Tug Messenger Line
Davit Rope
ETS Rope
Lifting Sling (Static)

BENEFITS / FEATURES

Superior Abrasion Resistance
Superior Breaking Load
Buoyant
Durable
Extremely Low Stretch
Lightweight
Easy to Splice
Does not Kink

SPECIFICATIONS

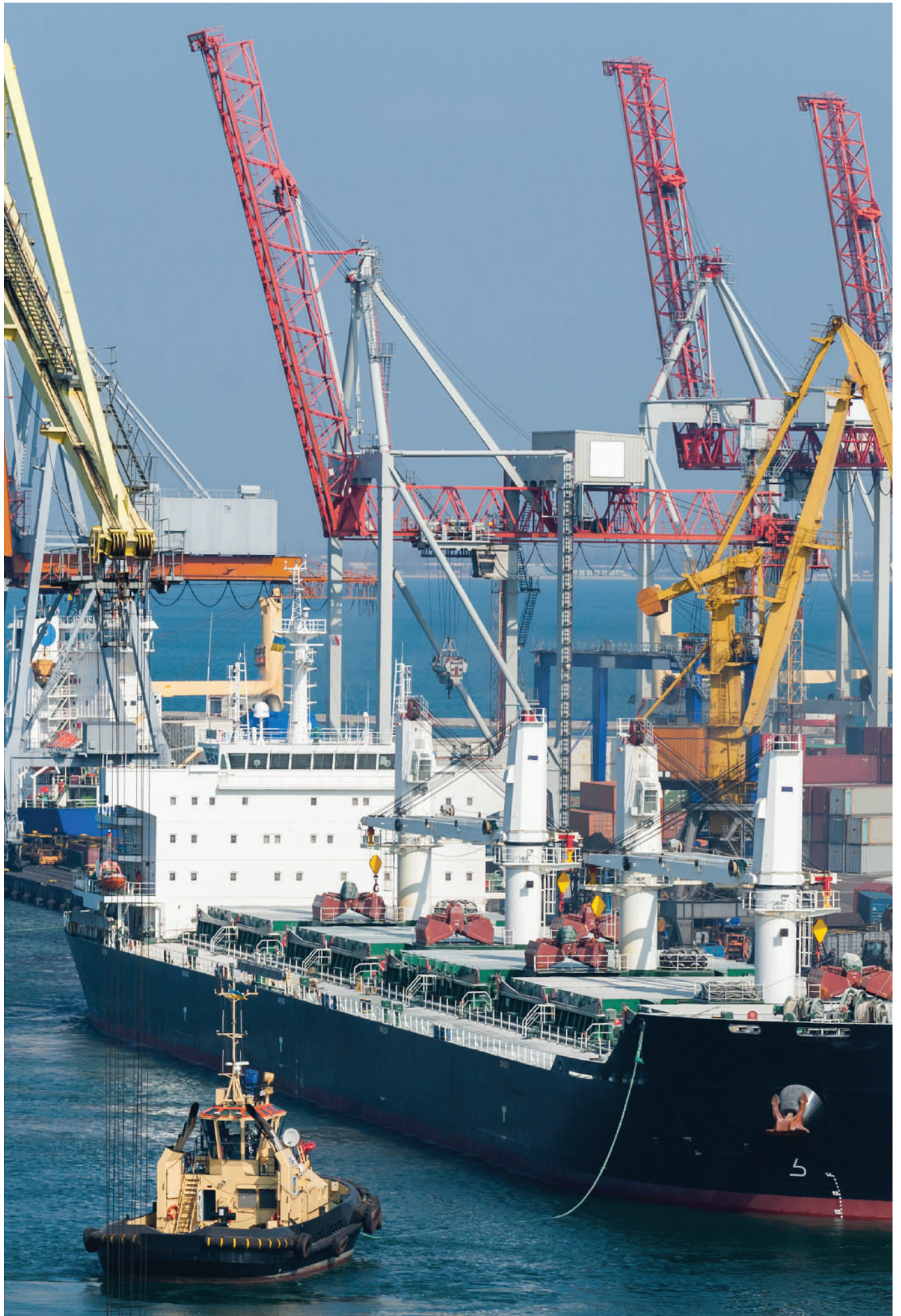
Material	: Coated Dyneema [®] SK75/78
Specific Gravity	: 0,97 kg/dm ³
Construction	: 12 Strand Braided
UV Resistance	: Excellent
Chemical Resistance	: Excellent
Melting Point	: 147°C
Critical Temperature	: 65°C
Working Stretch	: <1,5%
Fiber Water Absorption	: None
Wet Abrasion	: Excellent
Dry Abrasion	: Excellent
Standard	: EN ISO 10325
Length	: Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
16	14,80	27.960	25.165	5/8"	9,95	61.512	55.362
18	18,50	34.540	31.086	3/4"	12,43	75.988	68.389
20	22,70	41.670	37.500	13/16"	15,25	91.674	82.501
22	27,20	49.350	44.408	7/8"	18,28	108.570	97.698
24	32,20	57.020	51.316	1"	21,64	125.444	112.896
26	37,50	65.790	59.211	1-1/16"	25,20	144.738	130.264
28	43,30	75.120	67.599	1-1/8"	29,10	165.264	148.718
30	49,40	84.980	76.481	1-1/4"	33,20	186.956	168.258
32	55,90	94.850	85.363	1-5/16"	37,56	208.670	187.798
34	62,80	105.820	95.231	1 3/8"	42,20	232.804	209.508
36	70,10	117.330	105.593	1-1/2"	47,11	258.126	232.304
38	77,80	128.840	115.955	1-9/16"	52,28	283.448	255.101
40	85,90	140.910	126.810	1-5/8"	57,72	310.002	278.982
42	94,20	154.060	138.652	1-11/16"	63,30	338.932	305.035
44	103,20	167.220	150.495	1-3/4"	69,35	367.884	331.088
48	121,90	194.630	175.166	2"	81,92	428.186	385.365
50	131,60	209.440	188.488	2-1/16"	88,43	460.768	414.674
52	142,20	224.240	201.811	2-1/8"	95,56	493.328	443.984
56	163,90	255.490	229.936	2-1/4"	110,14	562.078	505.859
60	187,20	288.930	260.035	2-1/2"	125,80	635.646	572.077
64	212,00	323.470	291.121	2-5/8"	142,46	711.634	640.466
68	238,20	360.210	324.180	2-3/4"	160,07	792.462	713.196
72	265,90	398.580	358.720	3"	178,68	876.876	789.184
76	295,00	438.600	394.740	3-1/8"	198,24	964.920	868.428
80	325,60	479.720	431.747	3-1/4"	218,80	1.055.384	949.843
88	391,10	567.990	511.188	3-5/8"	262,82	1.249.578	1.124.614
96	462,40	662.290	596.057	4"	310,73	1.457.038	1.311.326

* Spliced Break Load (All tests are in Accordance with ISO 2307)





DYNE STRONG®

APPLICATIONS

Vessel Primary Mooring Line
Tug Main Tow Line
Tug Pendant
Salvage Rope

BENEFITS / FEATURES

Excellent Breaking Load
Durable
Very Low Stretch
Firm and Round
Does not Kink



SPECIFICATIONS

Material	:	Cover: HT Polyester Fiber Core: Coated Dyneema® SK75/78
Specific Gravity	:	1,00-1,20 kg/dm³
Construction	:	Cover: 32 Plaited Core: 12 Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Good
Melting Point	:	147-256°C
Critical Temperature	:	65°C
Working Stretch	:	<1%
Fiber Water Absorption	:	Approx. %0-1
Wet Abrasion	:	Good
Dry Abrasion	:	Good
Standard	:	EN ISO 10325
Length	:	Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
20	25,70	27.640	24.890	13/16"	17,27	60.808	54.758
22	32,10	34.780	31.310	7/8"	21,57	76.516	68.882
24	37,15	41.000	36.920	1"	24,96	90.200	81.224
26	43,35	48.030	43.240	1-1/16"	29,13	105.666	95.128
28	49,55	55.990	50.400	1-1/8"	33,30	123.178	110.880
30	57,80	64.960	58.500	1-1/4"	38,84	142.912	128.700
32	64,20	75.060	67.510	1-5/16"	43,14	165.132	148.522
34	70,60	84.030	75.670	1-3/8"	47,44	184.866	166.474
36	77,00	93.000	83.720	1-1/2"	51,74	204.600	184.184
38	89,85	103.000	92.700	1-9/16"	60,38	226.600	203.940
40	96,30	116.250	105.100	1-5/8"	64,71	255.750	231.220
42	102,70	127.880	115.200	1-11/16"	69,01	281.336	253.440
44	121,95	140.730	126.450	1-3/4"	81,95	309.606	278.190
48	141,20	164.180	147.860	2"	94,89	361.196	325.292
50	154,00	180.000	162.150	2-1/16"	103,49	396.000	356.730
52	166,90	195.790	176.450	2-1/8"	112,16	430.738	388.190
56	192,55	223.320	200.900	2-1/4"	129,39	491.304	441.980
60	224,65	256.970	231.500	2-1/2"	150,96	565.334	509.300

* Spliced Break Load (All tests are in Accordance with ISO 2307)



DYNE STRONG® D-TIGHT

APPLICATIONS

Vessel Primary Mooring Line
Tug Main Tow Line
Tug Pendant
Salvage Rope
Trawl/Bridle Line

BENEFITS / FEATURES

Superior Abrasion Resistance
Excellent Breaking Load
Durable
Very Low Stretch
Lightweight
Does not Kink



SPECIFICATIONS

Material	:	Cover: Coated Dyneema® SK75/78 Core: Coated Dyneema® SK75/78
Specific Gravity	:	0,97 kg/dm³
Construction	:	Cover: 32 Plaited Core: 12 Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1%
Fiber Water Absorption	:	None
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	EN ISO 10325
Length	:	Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/ 100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
22	29,65	34.780	31.310	7/8"	19,92	76.516	68.882
24	37,75	41.000	36.920	1"	25,37	90.200	81.224
26	42,70	48.030	43.240	1-1/16"	28,69	105.666	95.128
28	47,60	55.990	50.400	1-1/8"	31,99	123.178	110.880
30	59,10	64.960	58.500	1-1/4"	39,72	142.912	128.700
32	64,00	75.060	67.510	1-5/16"	43,01	165.132	148.522
34	72,10	84.030	75.670	1-3/8"	48,45	184.866	166.474
36	88,25	93.000	83.720	1-1/2"	59,30	204.600	184.184
38	93,20	103.000	92.700	1-9/16"	62,63	226.600	203.940
40	102,15	116.660	105.100	1-5/8"	68,64	256.652	231.220
42	110,00	127.870	115.200	1-11/16"	73,92	281.314	253.440
44	125,75	140.730	126.450	1-3/4"	84,50	309.606	278.190
48	149,30	164.180	147.860	2"	100,33	361.196	325.292
52	168,15	195.860	176.450	2-1/8"	113,00	430.891	388.190
56	188,60	223.320	200.900	2-1/4"	126,74	491.304	441.980
60	232,65	256.970	231.500	2-1/2"	156,34	565.334	509.300

* Spliced Break Load (All tests are in Accordance with ISO 2307)



DYNE STRONG® D-TIGHT ▲ HIGH PERFORMANCE ROPES



DYNE STRONG® D-PLUS

APPLICATIONS

Vessel Primary Mooring Line
Tug Main Tow Line
Tug Pendant
Salvage Rope
Trawl/Bridle Line

BENEFITS / FEATURES

Superior Abrasion Resistance
Excellent Breaking Load
Durable
Very Low Stretch
Lightweight
Does not Kink

SPECIFICATIONS

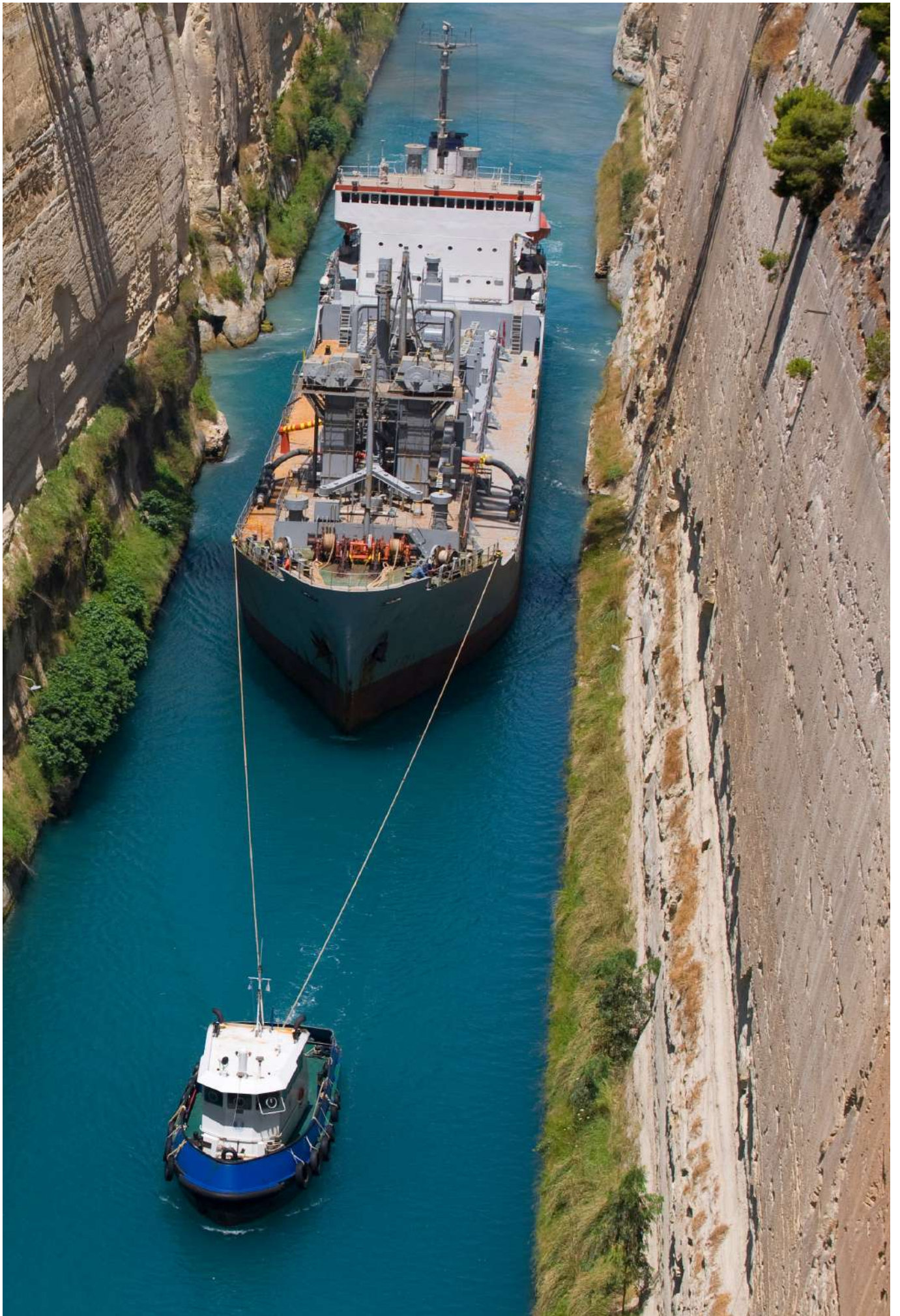
Material	:	Cover: Coated Dyneema® SK75/78 Core: Coated Dyneema® SK75/78
Specific Gravity	:	0,97 kg/dm³
Construction	:	Cover: 32 Plaited Core: 12 Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1%
Fiber Water Absorption	:	Approx. %0-1
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	EN ISO 10325
Length	:	Upon Request

* Other Colours & Larger Diameters Upon Request

DiA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DiA (inch)	Weight (lbs/ 100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
20	22,95	27.640	24.890	13/16"	15,42	60.808	54.758
22	27,85	34.780	31.310	7/8"	18,72	76.516	68.882
24	31,45	41.000	36.920	1"	21,13	90.200	81.224
26	37,75	48.030	43.240	1-1/16"	25,37	105.666	95.128
28	42,45	55.990	50.400	1-1/8"	28,53	123.178	110.880
30	50,80	64.960	58.500	1-1/4"	34,14	142.912	128.700
32	57,30	75.060	67.510	1-5/16"	38,51	165.132	148.522
34	62,25	84.030	75.670	1-3/8"	41,83	184.866	166.474
36	68,75	93.000	83.720	1-1/2"	46,20	204.600	184.184
38	78,65	103.000	92.700	1-9/16"	52,85	226.600	203.940
40	85,15	116.661	105.100	1-5/8"	57,22	256.654	231.220
42	90,10	127.870	115.200	1-11/16"	60,55	281.314	253.440
44	106,50	140.730	126.450	1-3/4"	71,57	309.606	278.190
48	122,90	164.180	147.860	2"	82,59	361.196	325.292
50	135,90	179.980	162.150	2-1/16"	91,32	395.956	356.730
52	147,35	195.860	176.450	2-1/8"	99,02	430.891	388.190
56	168,70	223.320	200.900	2-1/4"	113,37	491.304	441.980
60	196,55	256.970	231.500	2-1/2"	132,08	565.334	509.300

* Spliced Break Load (All tests are in Accordance with ISO 2307)







FORCE K[®] MAX

APPLICATIONS

Vessel Primary Mooring Line
General Working Line
Tug Pendants
Tug Main Tow Line
Tug Messenger Line
Davit Rope
ETS Rope
Lifting Sling (Static)

BENEFITS / FEATURES

Superior Abrasion Resistance
Excellent Breaking Load
Buoyant
Durable
Very Low Stretch
Lightweight
Easy to Splice
Does not Kink

SPECIFICATIONS

Material	: Coated UHMWPE Fiber
Specific Gravity	: 0,97 kg/dm ³
Construction	: 12 Strand Braided
UV Resistance	: Excellent
Chemical Resistance	: Excellent
Melting Point	: 147°C
Critical Temperature	: 65°C
Working Stretch	: <1,5%
Fiber Water Absorption	: None
Wet Abrasion	: Excellent
Dry Abrasion	: Excellent
Standard	: EN ISO 10325
Length	: Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/ 100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
16	15,20	26.010	23.455	5/8"	10,21	57.222	51.601
18	19,00	32.130	29.065	3/4"	12,77	70.686	63.943
20	23,30	38.760	34.675	13/16"	15,66	85.272	76.285
22	28,00	45.900	41.300	7/8"	18,82	100.980	90.860
24	33,10	53.040	47.930	1"	22,24	116.688	105.446
26	38,60	61.200	55.065	1-1/16"	25,94	134.640	121.143
28	44,50	69.870	62.715	1-1/8"	29,90	153.714	137.973
30	50,80	79.050	71.385	1-1/4"	34,14	173.910	157.047
32	57,50	88.230	79.540	1-5/16"	38,64	194.106	174.988
34	64,60	98.430	88.720	1 3/8"	43,41	216.546	195.184
36	72,20	109.140	98.405	1-1/2"	48,52	240.108	216.491
38	80,10	119.850	108.090	1-9/16"	53,83	263.670	237.798
40	88,40	131.070	117.780	1-5/8"	59,40	288.354	259.116
42	97,00	143.310	128.980	1-11/16"	65,18	315.282	283.756
44	106,20	155.550	140.215	1-3/4"	71,37	342.210	308.473
48	125,50	181.050	163.155	2"	84,34	398.310	358.941
50	135,50	194.820	175.340	2-1/16"	91,06	428.604	385.748
52	146,40	208.590	187.630	2-1/8"	98,38	458.898	412.786
56	168,80	237.660	213.635	2-1/4"	113,43	522.852	469.997
60	192,80	268.770	241.675	2-1/2"	129,56	591.294	531.685
64	218,30	300.900	270.735	2-5/8"	146,70	661.980	595.617
68	245,30	335.070	301.330	2-3/4"	164,84	737.154	662.926
72	273,80	370.770	333.450	3"	183,99	815.694	733.590
76	303,80	408.000	367.100	3-1/8"	204,15	897.600	807.620
80	335,30	446.250	401.780	3-1/4"	225,32	981.750	883.916
88	402,80	528.360	475.190	3-5/8"	270,68	1.162.392	1.045.418
96	476,20	616.080	554.220	4"	320,01	1.355.376	1.219.284

* Spliced Break Load (All tests are in Accordance with ISO 2307)



FORCE K® 12x12

APPLICATIONS

Vessel Primary Mooring Line
General Working Line
Tug Pendants
Tug Main Tow Line
Tug Messenger Line
Davit Rope
ETS Rope
Lifting Sling (Static)

BENEFITS / FEATURES

Ultimate Abrasion Resistance
Excellent Breaking Load
Buoyant
Durable
Very Low Stretch
Lightweight
Easy to Splice
Does not Kink

SPECIFICATIONS

Material	: Coated UHMWPE Fiber
Specific Gravity	: 0,97 kg/dm³
Construction	: 12x12 Strand Braided
UV Resistance	: Excellent
Chemical Resistance	: Excellent
Melting Point	: 147°C
Critical Temperature	: 65°C
Working Stretch	: <1,5%
Fiber Water Absorption	: None
Wet Abrasion	: Excellent
Dry Abrasion	: Excellent
Standard	: -
Length	: Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/ 100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
40	98,00	146.853	132.300	1-5/8"	65,88	323.077	291.060
44	118,00	160.950	145.000	1-3/4"	79,32	354.090	319.000
48	138,00	179.820	162.000	2"	92,77	395.604	356.400
52	168,00	216.450	195.000	2-1/8"	112,93	476.190	429.000
56	185,00	244.200	220.000	2-1/4"	124,36	537.240	484.000
60	224,00	267.510	241.000	2-1/2"	150,58	588.522	530.200
64	254,00	300.810	271.000	2-5/8"	170,74	661.782	596.200
68	283,00	333.555	300.500	2-3/4"	190,24	733.821	661.100
72	321,00	394.050	355.000	3"	215,78	866.910	781.000
76	350,00	429.015	386.500	3-1/8"	235,28	943.833	850.300
80	390,00	475.080	428.000	3-1/4"	262,17	1.045.176	941.600
84	448,00	560.550	505.000	3-1/2"	301,16	1.233.210	1.111.000
88	478,00	631.590	569.000	3-5/8"	321,32	1.389.498	1.251.800

* Spliced Break Load (All tests are in Accordance with ISO 2307)



FORCE K® 12x12 ► HIGH PERFORMANCE ROPES



FORCE K[®] MAX EXTREME

APPLICATIONS

Vessel Primary Mooring Line
General Working Line
Tug Pendant
Tug Main Tow Line
Tug Messenger Line
Davit Rope
ETS Rope
Lifting Sling (Static)

BENEFITS / FEATURES

Superior Abrasion Resistance
Superior Breaking Load
Buoyant
Durable
Extremely Low Stretch
Lightweight
Easy to Splice
Does not Kink

SPECIFICATIONS

Material	: Coated UHMWPE Fiber
Specific Gravity	: 0,97 kg/dm ³
Construction	: 12 Strand Braided
UV Resistance	: Excellent
Chemical Resistance	: Excellent
Melting Point	: 147°C
Critical Temperature	: 65°C
Working Stretch	: <1,5%
Fiber Water Absorption	: None
Wet Abrasion	: Excellent
Dry Abrasion	: Excellent
Standard	: EN ISO 10325
Length	: Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
16	14,80	27.960	25.165	5/8"	9,95	61.512	55.362
18	18,50	34.540	31.086	3/4"	12,43	75.988	68.389
20	22,70	41.670	37.500	13/16"	15,25	91.674	82.501
22	27,20	49.350	44.408	7/8"	18,28	108.570	97.698
24	32,20	57.020	51.316	1"	21,64	125.444	112.896
26	37,50	65.790	59.211	1-1/16"	25,20	144.738	130.264
28	43,30	75.120	67.599	1-1/8"	29,10	165.264	148.718
30	49,40	84.980	76.481	1-1/4"	33,20	186.956	168.258
32	55,90	94.850	85.363	1-5/16"	37,56	208.670	187.798
34	62,80	105.820	95.231	1 3/8"	42,20	232.804	209.508
36	70,10	117.330	105.593	1-1/2"	47,11	258.126	232.304
38	77,80	128.840	115.955	1-9/16"	52,28	283.448	255.101
40	85,90	140.910	126.810	1-5/8"	57,72	310.002	278.982
42	94,20	154.060	138.652	1-11/16"	63,30	338.932	305.035
44	103,20	167.220	150.495	1-3/4"	69,35	367.884	331.088
48	121,90	194.630	175.166	2"	81,92	428.186	385.365
50	131,60	209.440	188.488	2-1/16"	88,43	460.768	414.674
52	142,20	224.240	201.811	2-1/8"	95,56	493.328	443.984
56	163,90	255.490	229.936	2-1/4"	110,14	562.078	505.859
60	187,20	288.930	260.035	2-1/2"	125,80	635.646	572.077
64	212,00	323.470	291.121	2-5/8"	142,46	711.634	640.466
68	238,20	360.210	324.180	2-3/4"	160,07	792.462	713.196
72	265,90	398.580	358.720	3"	178,68	876.876	789.184
76	295,00	438.600	394.740	3-1/8"	198,24	964.920	868.428
80	325,60	479.720	431.747	3-1/4"	218,80	1.055.384	949.843
88	391,10	567.990	511.188	3-5/8"	262,82	1.249.578	1.124.614
96	462,40	662.290	596.057	4"	310,73	1.457.038	1.311.326

* Spliced Break Load (All tests are in Accordance with ISO 2307)





FORCE STRONG®

APPLICATIONS

Vessel Primary Mooring Line
Tug Main Tow Line
Tug Pendant
Salvage Rope

BENEFITS / FEATURES

Excellent Breaking Load
Durable
Very Low Stretch
Firm and Round
Does not Kink



SPECIFICATIONS

Material	:	Cover: HT Polyester Fiber Core: Coated UHMWPE Fiber
Specific Gravity	:	1,00-1,20 kg/dm³
Construction	:	Cover: 32 Plaited Core: 12 Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Good
Melting Point	:	147-256°C
Critical Temperature	:	65°C
Working Stretch	:	<1%
Fiber Water Absorption	:	Approx. %0-1
Wet Abrasion	:	Good
Dry Abrasion	:	Good
Standard	:	EN ISO 10325
Length	:	Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/ 100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
20	25,70	27.640	24.890	13/16"	17,27	60.808	54.758
22	32,10	34.780	31.310	7/8"	21,57	76.516	68.882
24	37,15	41.000	36.920	1"	24,96	90.200	81.224
26	43,35	48.030	43.240	1-1/16"	29,13	105.666	95.128
28	49,55	55.990	50.400	1-1/8"	33,30	123.178	110.880
30	57,80	64.960	58.500	1-1/4"	38,84	142.912	128.700
32	64,20	75.060	67.510	1-5/16"	43,14	165.132	148.522
34	70,60	84.030	75.670	1-3/8"	47,44	184.866	166.474
36	77,00	93.000	83.720	1-1/2"	51,74	204.600	184.184
38	89,85	103.000	92.700	1-9/16"	60,38	226.600	203.940
40	96,30	116.250	105.100	1-5/8"	64,71	255.750	231.220
42	102,70	127.880	115.200	1-11/16"	69,01	281.336	253.440
44	121,95	140.730	126.450	1-3/4"	81,95	309.606	278.190
48	141,20	164.180	147.860	2"	94,89	361.196	325.292
50	154,00	180.000	162.150	2-1/16"	103,49	396.000	356.730
52	166,90	195.790	176.450	2-1/8"	112,16	430.738	388.190
56	192,55	223.320	200.900	2-1/4"	129,39	491.304	441.980
60	224,65	256.970	231.500	2-1/2"	150,96	565.334	509.300

* Spliced Break Load (All tests are in Accordance with ISO 2307)



FORCE STRONG® H-TIGHT

APPLICATIONS

Vessel Primary Mooring Line
Tug Main Tow Line
Tug Pendant
Salvage Rope
Trawl/Bridle Line

BENEFITS / FEATURES

Superior Abrasion Resistance
Excellent Breaking Load
Durable
Very Low Stretch
Lightweight
Does not Kink



SPECIFICATIONS

Material	:	Cover: Coated UHMWPE Fiber Core: Coated UHMWPE Fiber
Specific Gravity	:	0,97 kg/dm³
Construction	:	Cover: 32 Plaited Core: 12 Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1%
Fiber Water Absorption	:	None
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	EN ISO 10325
Length	:	Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/ 100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
22	29,65	34.780	31.310	7/8"	19,92	76.516	68.882
24	37,75	41.000	36.920	1"	25,37	90.200	81.224
26	42,70	48.030	43.240	1-1/16"	28,69	105.666	95.128
28	47,60	55.990	50.400	1-1/8"	31,99	123.178	110.880
30	59,10	64.960	58.500	1-1/4"	39,72	142.912	128.700
32	64,00	75.060	67.510	1-5/16"	43,01	165.132	148.522
34	72,10	84.030	75.670	1-3/8"	48,45	184.866	166.474
36	88,25	93.000	83.720	1-1/2"	59,30	204.600	184.184
38	93,20	103.000	92.700	1-9/16"	62,63	226.600	203.940
40	102,15	116.660	105.100	1-5/8"	68,64	256.652	231.220
42	110,00	127.870	115.200	1-11/16"	73,92	281.314	253.440
44	125,75	140.730	126.450	1-3/4"	84,50	309.606	278.190
48	149,30	164.180	147.860	2"	100,33	361.196	325.292
52	168,15	195.860	176.450	2-1/8"	113,00	430.891	388.190
56	188,60	223.320	200.900	2-1/4"	126,74	491.304	441.980
60	232,65	256.970	231.500	2-1/2"	156,34	565.334	509.300

* Spliced Break Load (All tests are in Accordance with ISO 2307)



FORCE STRONG® H-TIGHT HIGH PERFORMANCE ROPES



FORCE STRONG® H-PLUS

APPLICATIONS

Vessel Primary Mooring Line
Tug Main Tow Line
Tug Pendant
Salvage Rope
Trawl/Bridle Line

BENEFITS / FEATURES

Superior Abrasion Resistance
Excellent Breaking Load
Durable
Very Low Stretch
Lightweight
Does not Kink

SPECIFICATIONS

Material	:	Cover: Coated UHMWPE Fiber Core: Coated UHMWPE Fiber
Specific Gravity	:	0,97 kg/dm ³
Construction	:	Cover: 32 Plaited Core: 12 Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1%
Fiber Water Absorption	:	Approx. %0-1
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	EN ISO 10325
Length	:	Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/ 100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
20	22,95	27.640	24.890	13/16"	15,42	60.808	54.758
22	27,85	34.780	31.310	7/8"	18,72	76.516	68.882
24	31,45	41.000	36.920	1"	21,13	90.200	81.224
26	37,75	48.030	43.240	1-1/16"	25,37	105.666	95.128
28	42,45	55.990	50.400	1-1/8"	28,53	123.178	110.880
30	50,80	64.960	58.500	1-1/4"	34,14	142.912	128.700
32	57,30	75.060	67.510	1-5/16"	38,51	165.132	148.522
34	62,25	84.030	75.670	1-3/8"	41,83	184.866	166.474
36	68,75	93.000	83.720	1-1/2"	46,20	204.600	184.184
38	78,65	103.000	92.700	1-9/16"	52,85	226.600	203.940
40	85,15	116.661	105.100	1-5/8"	57,22	256.654	231.220
42	90,10	127.870	115.200	1-11/16"	60,55	281.314	253.440
44	106,50	140.730	126.450	1-3/4"	71,57	309.606	278.190
48	122,90	164.180	147.860	2"	82,59	361.196	325.292
50	135,90	179.980	162.150	2-1/16"	91,32	395.956	356.730
52	147,35	195.860	176.450	2-1/8"	99,02	430.891	388.190
56	168,70	223.320	200.900	2-1/4"	113,37	491.304	441.980
60	196,55	256.970	231.500	2-1/2"	132,08	565.334	509.300

* Spliced Break Load (All tests are in Accordance with ISO 2307)





NAVY H PRO[®] MIX HT

APPLICATIONS

Vessel Primary Mooring Line
Tug Main Tow Line
Tug Pendant
Salvage Rope
Trawl/Bridle Line

BENEFITS / FEATURES

Superior Abrasion Resistance
Excellent Breaking Load
Durable
Very Low Stretch
Lightweight
Does not Kink

SPECIFICATIONS

Material	:	Cover: Blended Technora [®] Fiber - UHMWPE Fiber Core: Coated UHMWPE Fiber
Specific Gravity	:	0,99-1,20 kg/dm ³
Construction	:	Cover: 24-32 Plaited Core: 12 Plaited
UV Resistance	:	Good
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1,5%
Fiber Water Absorption	:	Approx. %0-1
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	EN ISO 10325
Length	:	Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/ 100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
20	23,40	27.640	24.890	13/16"	15,72	60.808	54.758
22	27,99	34.780	31.310	7/8"	18,81	76.516	68.882
24	34,21	41.000	36.920	1"	22,99	90.200	81.224
28	45,85	55.990	50.400	1-1/8"	30,81	123.178	110.880
32	60,73	75.060	67.510	1-5/16"	40,81	165.132	148.522

* Spliced Break Load (All tests are in Accordance with ISO 2307)



FORCE DURA MIX AH MCF

APPLICATIONS

Vessel Primary Mooring Line
Tug Main Tow Line
Tug Pendant
Salvage Rope
Trawl/Bridle Line

BENEFITS / FEATURES

Superior Abrasion Resistance
Excellent Breaking Load
Durable
Very Low Stretch
Lightweight
Does not Kink

SPECIFICATIONS

Material	:	Cover: %50 Aramid Fiber-%50 UHMWPE Fiber with Marine Chemical Finish (MCF) Core: Uncoated UHMWPE Fiber
Specific Gravity	:	1,00-1,20 kg/dm³
Construction	:	Cover: 32 Plaited Core: 12 Plaited
UV Resistance	:	Very Good
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1,5%
Fiber Water Absorption	:	Approx. %0-1
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	EN ISO 10325
Length	:	Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/ 100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
20	25,00	29.445	26.500	13/16"	16,80	64.779	58.300
22	32,00	38.000	34.200	7/8"	21,50	83.600	75.240
24	36,00	44.220	39.800	1"	24,19	97.284	87.560
28	48,00	57.775	52.000	1-1/8"	32,26	127.105	114.400

* Spliced Break Load (All tests are in Accordance with ISO 2307)



FORCE DURA MIX AH MCF ► HIGH PERFORMANCE ROPES



LUPP® SQUARE FILM

APPLICATIONS

Vessel Primary Mooring Line
 Secondary Mooring Line
 General Working Line
 Tug Barge Tie-Up Line
 Tug Barge H-Bitt Working Line
 Trawl/Bridle Line
 Other Fishing Line
 ETS Rope

BENEFITS / FEATURES

Excellent Grip
 Moderate Elongation
 Buoyant
 Economically Priced
 Does not Kink
 Easy to Splice
 %25-30 More Strength than Normal
 PP Ropes



SPECIFICATIONS

Material	: 100% HT Polyolefin Film Fiber
Type	: L
Specific Gravity	: 0,94 kg/dm ³
Construction	: 8 Strand Plaited (4x2)
UV Resistance	: Sufficient
Chemical Resistance	: Very Good
Melting Point	: 165°C
Critical Temperature	: 80°C
Elongation At Break	: Approx.23%
Fiber Water Absorption	: None
Wet Abrasion	: Sufficient
Dry Abrasion	: Sufficient
Standard	: EN ISO 10572
Length	: 200-220 m Coil

* Other Colours on Request

DIA (mm)	Weight (kg/220m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/220ft)	Min. B.Load (lbs)
40	158,40	28.500	1-5/8"	106,44	62.700
44	192,94	34.013	1-3/4"	129,66	74.828
48	228,80	41.500	2"	153,75	91.300
52	268,40	48.291	2-1/8"	180,36	106.240
56	312,40	56.000	2-1/4"	209,93	123.200
60	358,60	63.518	2-1/2"	240,98	139.739
64	407,00	72.200	2-5/8"	273,50	158.840
72	514,80	96.500	3"	345,94	212.300
80	638,00	111.500	3-1/4"	428,73	245.300
88	772,20	133.352	3-5/8"	518,92	293.374
96	917,40	156.884	4"	616,49	345.146

* Unspliced Break Load (All tests are in Accordance with ISO 2307)



TANKER SQUARE

APPLICATIONS

Vessel Primary Mooring Line
Secondary Mooring Line
General Working Line
Tug Barge Tie-Up Line
Tug H-Bitt Working Line
Trawl/Bridle Line

BENEFITS / FEATURES

Good Breaking Load
Good Shock Absorption
Does not Kink
Easy to Splice
Durable
Flexible
General Accordance with OCIMF Guideline



SPECIFICATIONS

Material	: 100% HT Polyolefin & Polyester Mix Fiber
Type	: L
Specific Gravity	: 1,10 kg/dm ³
Construction	: 8 Strand Plaited (4x2)
UV Resistance	: Good
Chemical Resistance	: Very Good
Melting Point	: 165°C
Critical Temperature	: 80°C
Elongation At Break	: Approx.19%
Fiber Water Absorption	: 0,15%
Wet Abrasion	: Good
Dry Abrasion	: Good
Standard	: ISO 10556
Length	: 200-220 m Coil

* Other Colours on Request

DIA (mm)	Weight (kg/220m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/220ft)	Min. B.Load (lbs)
40	185,00	30.700	1-5/8"	124,32	67.540
44	235,40	36.840	1-3/4"	158,19	81.048
48	282,00	47.200	2"	189,50	103.840
52	330,00	55.028	2-1/8"	221,76	121.061
56	378,00	64.100	2-1/4"	254,02	141.020
60	437,80	73.190	2-1/2"	294,20	161.017
64	495,00	84.100	2-5/8"	332,64	185.020
72	627,00	103.800	3"	421,34	228.360
80	775,00	127.700	3-1/4"	520,80	280.940
88	941,60	153.956	3-5/8"	632,75	338.703
96	1.122,00	181.406	4"	753,98	399.092

* Unspliced Break Load (All tests are in Accordance with ISO 2307)



LUPES® VIPERA

APPLICATIONS

Secondary Mooring Line
General Working Line
Tug Shock Line
Trawl/Bridle Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
Superior Chafe Cover
High Breaking Load
Excellent Abrasion Resistance

SPECIFICATIONS

Material	: 100% HT Polyester Fiber
Type	: -
Specific Gravity	: 1,38 kg/dm³
Construction	: Cover: 16-20-24-32 Plaited Core: 12-16 Plaited
UV Resistance	: Excellent
Chemical Resistance	: Good
Melting Point	: 256°C
Critical Temperature	: 170°C
Elongation at Break	: Approx. %15
Fiber Water Absorption	: Approx. %1-2
Wet Abrasion	: Good
Dry Abrasion	: Good
Standard	: EN ISO 10547
Length	: 100-200 m Wooden Spool or Coil

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
8	4,85	1.320	5/16"	3,26	2.904
10	7,45	2.050	3/8"	5,01	4.510
12	11,00	2.900	1/2"	7,39	6.380
14	14,80	3.910	9/16"	9,95	8.602
16	19,40	5.070	5/8"	13,04	11.154
18	24,80	6.370	3/4"	16,67	14.014
20	30,40	7.800	13/16"	20,43	17.160
22	36,85	9.380	7/8"	24,76	20.636
24	43,65	11.110	1"	29,33	24.442
26	51,25	14.385	1-1/16"	34,44	31.647
28	59,40	16.630	1-1/8"	39,93	36.586
30	71,70	18.972	1-1/4"	48,18	41.738
32	81,60	21.420	1-5/16"	54,84	47.124
36	103,00	26.928	1-1/2"	69,22	59.242
40	128,00	33.048	1-5/8"	86,02	72.706
44	154,00	39.678	1-3/4"	103,49	87.292
48	184,00	46.920	2"	123,65	103.224
52	216,00	54.774	2-1/8"	145,15	120.503
56	250,00	63.036	2-1/4"	168,00	138.679
60	287,00	72.114	2-1/2"	192,86	158.651
64	326,00	81.600	2-5/8"	219,07	179.520
72	413,00	102.000	3"	277,54	224.400

* Unspliced Break Load (All tests are in Accordance with ISO 2307)

LUPA® VIPERA

APPLICATIONS

Secondary Mooring Line
General Working Line
Vessel Pendant
Tug Shock Line
Tug Pendant

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
Superior Chafe Cover
High Breaking Load
Excellent Shock Absorption

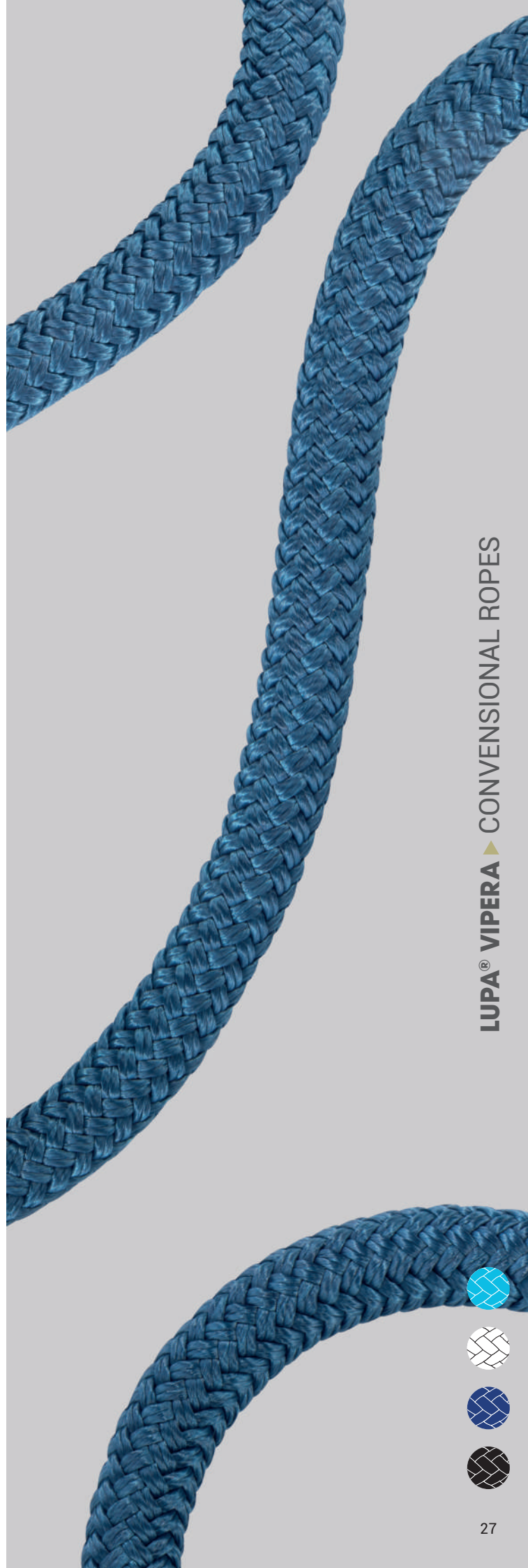
SPECIFICATIONS

Material	:	100% HT Polyamide Fiber
Type	:	-
Specific Gravity	:	1,14 kg/dm³
Construction	:	Cover: 16-20-24-32 Plaited Core: 12-16 Plaited
UV Resistance	:	Very Good
Chemical Resistance	:	Good
Melting Point	:	218°C
Critical Temperature	:	130°C
Elongation at Break	:	Approx. %30
Fiber Water Absorption	:	Approx. %3-4
Wet Abrasion	:	Sufficient
Dry Abrasion	:	Good
Standard	:	EN ISO 10554
Length	:	100-200 m Wooden Spool or Coil

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
8	4,10	1.420	5/16"	2,76	3.124
10	6,20	2.220	3/8"	4,17	4.884
12	9,20	3.190	1/2"	6,18	7.018
14	12,40	4.330	9/16"	8,33	9.526
16	16,25	5.640	5/8"	10,92	12.408
18	20,40	7.120	3/4"	13,71	15.664
20	25,50	8.790	13/16"	17,14	19.338
22	31,00	10.600	7/8"	20,83	23.320
24	36,65	12.640	1"	24,63	27.808
26	43,00	14.790	1-1/16"	28,90	32.538
28	49,75	17.130	1-1/8"	33,43	37.686
30	56,00	19.686	1-1/4"	37,63	43.309
32	63,70	22.338	1-5/16"	42,81	49.144
36	80,60	28.254	1-1/2"	54,16	62.159
40	99,50	34.782	1-5/8"	66,86	76.520
44	120,00	42.024	1-3/4"	80,64	92.453
48	143,00	49.980	2"	96,10	109.956
52	168,00	58.548	2-1/8"	112,90	128.806
56	195,00	67.830	2-1/4"	131,04	149.226
60	224,00	77.724	2-1/2"	150,53	170.993
64	255,00	88.434	2-5/8"	171,36	194.555
72	322,00	112.200	3"	216,38	246.840

* Unspliced Break Load (All tests are in Accordance with ISO 2307)



LUPA® VIPERA ▲ CONVENTIONAL ROPES





CLASSIC
LOOK



LUPES® ROUND

APPLICATIONS

Secondary Mooring Line
General Working Line
Vessel Pendant
Tug Main Tow Line
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
High Breaking Load
Easy to Splice
Excellent Abrasion Resistance

SPECIFICATIONS

Material	: 100% HT Polyester Fiber
Type	: T
Specific Gravity	: 1,38 kg/dm ³
Construction	: 12 Strand Plaited
UV Resistance	: Excellent
Chemical Resistance	: Good
Melting Point	: 256°C
Critical Temperature	: 170°C
Elongation at Break	: Approx. %15-20
Fiber Water Absorption	: Approx. %1-2
Wet Abrasion	: Good
Dry Abrasion	: Good
Standard	: EN ISO 1141
Length	: 100-200 m Wooden Spool or Coil

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
18	27,15	7.640	3/4"	18,24	16.808
20	30,40	8.250	13/16"	20,43	18.150
22	36,70	10.000	7/8"	24,66	22.000
24	43,70	11.500	1"	29,37	25.300
26	51,20	13.500	1-1/16"	34,41	29.700
28	59,50	15.500	1-1/8"	39,98	34.100
30	68,30	17.750	1-1/4"	45,90	39.050
32	77,70	20.000	1-5/16"	52,21	44.000
34	88,00	22.500	1 3/8"	59,14	49.500
36	98,40	25.000	1-1/2"	66,12	55.000
38	109,70	29.000	1 9/16"	73,72	63.800
40	121,00	33.000	1-5/8"	81,31	72.600
42	134,00	36.250	1-11/16"	90,05	79.750
44	147,00	39.500	1-3/4"	98,78	86.900
46	161,00	42.750	1-13/16"	108,19	94.050
48	175,00	46.000	2"	117,60	101.200
52	205,00	54.000	2-1/8"	137,76	118.800
56	238,00	62.000	2-1/4"	159,94	136.400
60	273,00	71.000	2-1/2"	183,46	156.200
64	311,00	80.000	2-5/8"	208,99	176.000
72	393,00	100.000	3"	264,10	220.000
80	486,00	123.000	3-1/4"	326,59	270.600
88	588,00	148.000	3-5/8"	395,13	325.600
96	699,00	175.000	4"	469,73	385.000

* Unspliced Break Load (All tests are in Accordance with ISO 2307)

LUPA® ROUND

APPLICATIONS

Secondary Mooring Line
General Working Line
Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
High Breaking Load
Easy to Splice
Excellent Shock Absorption

SPECIFICATIONS

Material	:	100% HT Polyamide Fiber
Type	:	T
Specific Gravity	:	1,14 kg/dm ³
Construction	:	12 Strand Plaited
UV Resistance	:	Very Good
Chemical Resistance	:	Good
Melting Point	:	218°C
Critical Temperature	:	130°C
Elongation at Break	:	Approx. %30-35
Fiber Water Absorption	:	Approx. %3-4
Wet Abrasion	:	Sufficient
Dry Abrasion	:	Good
Standard	:	EN ISO 1140
Length	:	100-200 m Wooden Spool or Coil

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
18	23,00	8.000	3/4"	15,46	17.600
20	25,00	8.670	13/16"	16,80	19.074
22	30,50	10.300	7/8"	20,50	22.660
24	36,00	12.030	1"	24,19	26.466
26	42,50	14.500	1-1/16"	28,56	31.900
28	49,00	17.000	1-1/8"	32,93	37.400
30	56,00	19.000	1-1/4"	37,63	41.800
32	64,00	21.125	1-5/16"	43,01	46.475
34	72,50	24.310	1 3/8"	48,72	53.482
36	81,00	27.500	1-1/2"	54,43	60.500
38	90,50	30.750	1 9/16"	60,82	67.650
40	100,00	34.000	1-5/8"	67,20	74.800
42	110,50	37.500	1-11/16"	74,26	82.500
44	121,00	41.000	1-3/4"	81,31	90.200
46	132,50	44.500	1-13/16"	89,04	97.900
48	144,20	48.000	2"	96,90	105.600
52	170,00	58.000	2-1/8"	114,24	127.600
56	197,00	68.000	2-1/4"	132,38	149.600
60	226,00	76.250	2-1/2"	151,87	167.750
64	257,00	84.500	2-5/8"	172,70	185.900
72	325,00	110.000	3"	218,40	242.000
80	401,00	129.000	3-1/4"	269,47	283.800
88	486,00	152.000	3-5/8"	326,59	334.400
96	578,00	183.000	4"	388,41	402.600

* Unspliced Break Load (All tests are in Accordance with ISO 2307)

LUPA® ROUND ▲ CONVENTIONAL ROPES



CLASSIC
LOOK

LUPP® ROUND

APPLICATIONS

Secondary Mooring Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Economically Priced
Buoyant
Easy to Splice

SPECIFICATIONS

Material	:	100% HT Polypropylene Fiber
Type	:	T
Specific Gravity	:	0,91 kg/dm ³
Construction	:	12 Strand Plaited
UV Resistance	:	Sufficient
Chemical Resistance	:	Very Good
Melting Point	:	165°C
Critical Temperature	:	80°C
Elongation at Break	:	Approx. %23
Fiber Water Absorption	:	None
Wet Abrasion	:	Sufficient
Dry Abrasion	:	Sufficient
Standard	:	EN ISO 1346
Length	:	100-200 m Wooden Spool or Coil

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
18	16,70	6.000	3/4"	11,22	13.200
20	18,10	6.500	13/16"	12,16	14.300
22	21,90	7.740	7/8"	14,72	17.028
24	26,00	9.060	1"	17,47	19.932
26	30,80	10.500	1-1/16"	20,70	23.100
28	35,40	12.900	1-1/8"	23,79	28.380
30	40,70	14.600	1-1/4"	27,35	32.120
32	46,30	16.400	1-5/16"	31,11	36.080
34	52,40	18.250	1 3/8"	35,21	40.150
36	58,60	20.100	1-1/2"	39,38	44.220
38	65,40	22.200	1 9/16"	43,95	48.840
40	72,30	24.300	1-5/8"	48,59	53.460
42	79,90	26.650	1-11/16"	53,69	58.630
44	87,50	29.000	1-3/4"	58,80	63.800
46	95,70	31.350	1-13/16"	64,31	68.970
48	104,00	33.700	2"	69,89	74.140
52	122,20	39.150	2-1/8"	82,12	86.130
56	142,00	44.600	2-1/4"	95,42	98.120
60	163,00	50.700	2-1/2"	109,54	111.540
64	185,00	56.800	2-5/8"	124,32	124.960
72	234,00	70.200	3"	157,25	154.440
80	289,00	86.000	3-1/4"	194,21	189.200
88	350,00	102.000	3-5/8"	235,20	224.400
96	417,00	120.000	4"	280,22	264.000

* Unspliced Break Load (All tests are in Accordance with ISO 2307)



CLASSIC
LOOK

LUPES® SQUARE

APPLICATIONS

Secondary Mooring Line
General Working Line
Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
High Breaking Load
Easy to Splice
Excellent Abrasion Resistance

SPECIFICATIONS

Material	: 100% HT Polyester Fiber
Type	: L
Specific Gravity	: 1,38 kg/dm ³
Construction	: 8 Strand Plaited (4x2)
UV Resistance	: Excellent
Chemical Resistance	: Good
Melting Point	: 256°C
Critical Temperature	: 170°C
Elongation at Break	: Approx. %15-20
Fiber Water Absorption	: Approx. %1-2
Wet Abrasion	: Good
Dry Abrasion	: Good
Standard	: EN ISO 1141
Length	: 200 m Plastic/Wooden Spool or Coil

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
12	10,90	2.875	1/2"	7,32	6.325
14	14,90	3.875	9/16"	10,01	8.525
16	19,40	5.000	5/8"	13,04	11.000
18	24,60	6.250	3/4"	16,53	13.750
20	30,40	8.250	13/16"	20,43	18.150
22	36,70	10.000	7/8"	24,66	22.000
24	43,70	11.500	1"	29,37	25.300
26	51,20	13.500	1-1/16"	34,41	29.700
28	59,50	15.500	1-1/8"	39,98	34.100
30	68,30	17.500	1-1/4"	45,90	38.500
32	77,70	20.000	1-5/16"	52,21	44.000
34	88,00	22.500	1 3/8"	59,14	49.500
36	98,40	25.000	1-1/2"	66,12	55.000
38	109,70	29.000	1 9/16"	73,72	63.800
40	121,00	33.000	1-5/8"	81,31	72.600
44	147,00	39.750	1-3/4"	98,78	87.450
48	175,00	46.500	2"	117,60	102.300
52	205,00	53.800	2-1/8"	137,76	118.360
56	238,00	61.700	2-1/4"	159,94	135.740

*Unspliced Break Load (All tests are in Accordance with ISO 2307)

LUPA[®] SQUARE

APPLICATIONS

Secondary Mooring Line
General Working Line
Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
High Breaking Load
Easy to Splice
Excellent Shock Absorption

SPECIFICATIONS

Material	:	100% HT Polyamide Fiber
Type	:	L
Specific Gravity	:	1,14 kg/dm ³
Construction	:	8 Strand Plaited (4x2)
UV Resistance	:	Very Good
Chemical Resistance	:	Good
Melting Point	:	218°C
Critical Temperature	:	130°C
Elongation at Break	:	Approx. %30-35
Fiber Water Absorption	:	Approx. %3-4
Wet Abrasion	:	Sufficient
Dry Abrasion	:	Good
Standard	:	EN ISO 1140
Length	:	200 m Plastic/Wooden Spool or Coil

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
12	9,00	3.060	1/2"	6,05	6.732
14	12,30	4.250	9/16"	8,27	9.350
16	16,00	5.400	5/8"	10,75	11.880
18	20,50	6.875	3/4"	13,78	15.125
20	25,00	8.500	13/16"	16,80	18.700
22	30,50	10.250	7/8"	20,50	22.550
24	36,00	12.000	1"	24,19	26.400
26	42,50	14.500	1-1/16"	28,56	31.900
28	49,00	17.000	1-1/8"	32,93	37.400
30	56,00	19.000	1-1/4"	37,63	41.800
32	64,00	21.125	1-5/16"	43,01	46.475
34	72,50	24.310	1 3/8"	48,72	53.482
36	81,00	27.500	1-1/2"	54,43	60.500
38	90,50	30.750	1-9/16"	60,82	67.650
40	100,00	34.000	1-5/8"	67,20	74.800
44	121,00	40.800	1-3/4"	81,31	89.760
48	144,00	47.800	2"	96,77	105.160
52	170,00	55.600	2-1/8"	114,24	122.320
56	197,00	63.600	2-1/4"	132,38	139.920

* Unspliced Break Load (All tests are in Accordance with ISO 2307)

LUPA[®] SQUARE ▲ CONVENTIONAL ROPES



CLASSIC
LOOK

LUPP® SQUARE

APPLICATIONS

Secondary Mooring Line
Other Fishing Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Economically Priced
Buoyant
Easy to Splice

SPECIFICATIONS

Material	: 100% HT Polypropylene Fiber
Type	: L
Specific Gravity	: 0,91 kg/dm ³
Construction	: 8 Strand Plaited (4x2)
UV Resistance	: Sufficient
Chemical Resistance	: Very Good
Melting Point	: 165°C
Critical Temperature	: 80°C
Elongation at Break	: Approx. %23
Fiber Water Absorption	: None
Wet Abrasion	: Sufficient
Dry Abrasion	: Sufficient
Standard	: EN ISO 1346
Length	: 200 m Plastic/Wooden Spool or Coil

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
12	6,51	2.280	1/2"	4,37	5.016
14	8,86	3.225	9/16"	5,95	7.095
16	11,60	4.310	5/8"	7,80	9.482
18	14,60	5.350	3/4"	9,81	11.770
20	18,10	6.500	13/16"	12,16	14.300
22	21,90	7.740	7/8"	14,72	17.028
24	26,00	9.060	1"	17,47	19.932
26	30,80	10.500	1-1/16"	20,70	23.100
28	35,40	12.900	1-1/8"	23,79	28.380
30	40,70	14.600	1-1/4"	27,35	32.120
32	46,30	16.400	1-5/16"	31,11	36.080
34	52,40	18.250	1 3/8"	35,21	40.150
36	58,60	20.100	1-1/2"	39,38	44.220
38	65,40	22.200	1 9/16"	43,95	48.840
40	72,30	24.300	1-5/8"	48,59	53.460
44	87,50	29.150	1-3/4"	58,80	64.130
48	104,00	34.100	2"	69,89	75.020
52	122,00	39.400	2-1/8"	81,98	86.680
56	142,00	45.300	2-1/4"	95,42	99.660

* Unspliced Break Load (All tests are in Accordance with ISO 2307)





CLASSIC
LOOK

LUPES® TWIST

APPLICATIONS

General Working Line
Tug Barge Tie-Up Line
Other Fishing Line

BENEFITS / FEATURES

Does not Harden
Soft Hand
Durable
High Breaking Load
Easy to Splice
Excellent Abrasion Resistance

SPECIFICATIONS

Material	:	100% HT Polyester Fiber
Type	:	A
Specific Gravity	:	1,38 kg/dm ³
Construction	:	3 Strand Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Good
Melting Point	:	256°C
Critical Temperature	:	170°C
Elongation at Break	:	Approx. %15-20
Fiber Water Absorption	:	Approx. %1-2
Wet Abrasion	:	Good
Dry Abrasion	:	Good
Standard	:	EN ISO 1141
Length	:	200 m Plastic/Wooden Spool or Coil

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
4	1,21	325	5/32"	0,81	715
5	1,90	515	3/16"	1,28	1.133
6	2,73	720	1/4"	1,83	1.584
8	4,85	1.300	5/16"	3,26	2.860
10	7,58	2.060	3/8"	5,09	4.532
12	10,90	2.875	1/2"	7,32	6.325
14	14,90	3.875	9/16"	10,01	8.525
16	19,40	5.000	5/8"	13,04	11.000
18	24,60	6.250	3/4"	16,53	13.750
20	30,30	8.250	13/16"	20,36	18.150
22	36,70	10.000	7/8"	24,66	22.000
24	43,70	11.500	1"	29,37	25.300
26	51,20	13.500	1-1/16"	34,41	29.700
28	59,40	15.500	1-1/8"	39,92	34.100
30	68,20	17.750	1-1/4"	45,83	39.050
32	77,60	20.000	1-5/16"	52,15	44.000
36	98,40	25.000	1-1/2"	66,12	55.000
40	121,00	33.000	1-5/8"	81,31	72.600
48	175,00	46.000	2"	117,60	101.200
56	238,00	62.000	2-1/4"	159,94	136.400
64	311,00	80.000	2-5/8"	208,99	176.000

* Unspliced Break Load (All tests are in Accordance with ISO 2307)

LUPA® TWIST

APPLICATIONS

Secondary Mooring Line
General Working Line
Tug Shock Line
Tug Pendant
Trawl/Bridle Line
Other Fishing Line

BENEFITS / FEATURES

Does not Harden
Soft Hand
Durable
High Breaking Load
Easy to Splice
Excellent Shock Absorption

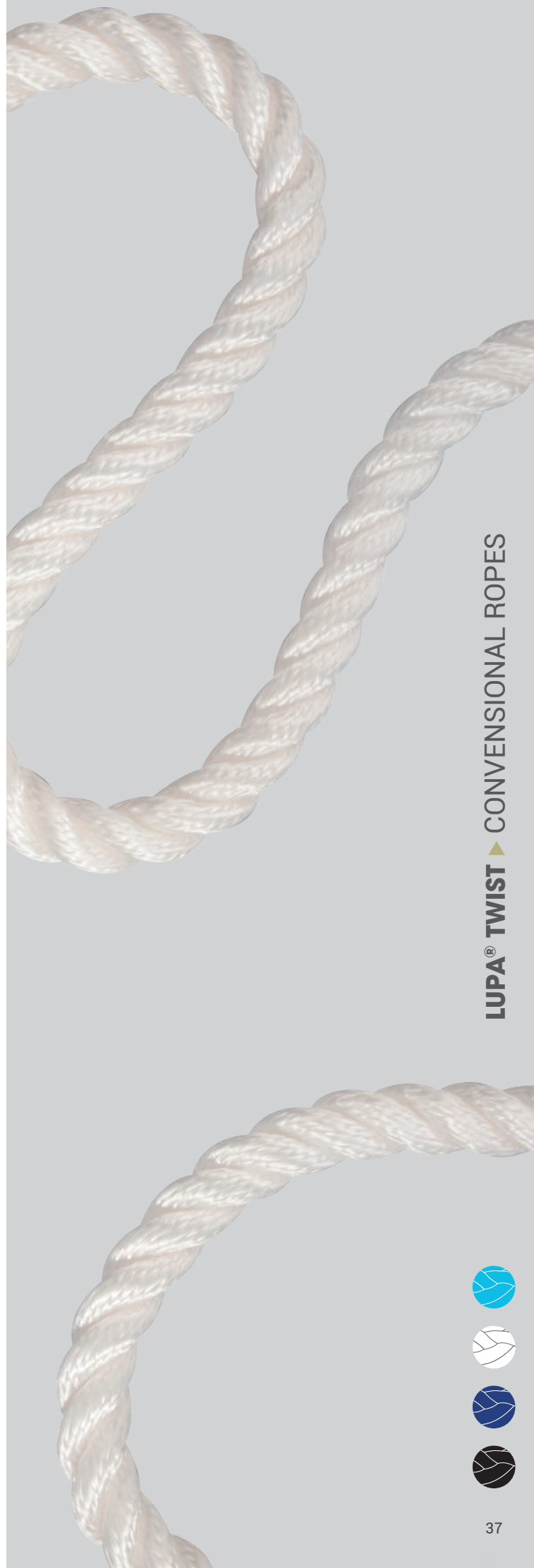
SPECIFICATIONS

Material	:	100% HT Polyamide Fiber
Type	:	A
Specific Gravity	:	1,14 kg/dm ³
Construction	:	3 Strand Plaited
UV Resistance	:	Very Good
Chemical Resistance	:	Good
Melting Point	:	218°C
Critical Temperature	:	130°C
Elongation at Break	:	Approx. %30-35
Fiber Water Absorption	:	Approx. %3-4
Wet Abrasion	:	Sufficient
Dry Abrasion	:	Good
Standard	:	EN ISO 1140
Length	:	200 m Plastic/Wooden Spool or Coil

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
4	0,98	380	5/32"	0,66	836
5	1,54	570	3/16"	1,03	1.254
6	2,22	810	1/4"	1,49	1.782
8	3,95	1.420	5/16"	2,65	3.124
10	6,17	2.160	3/8"	4,15	4.752
12	8,88	3.060	1/2"	5,97	6.732
14	12,10	4.250	9/16"	8,13	9.350
16	15,80	5.280	5/8"	10,62	11.616
18	20,00	6.875	3/4"	13,44	15.125
20	24,70	8.500	13/16"	16,60	18.700
22	29,90	10.250	7/8"	20,09	22.550
24	35,50	12.000	1"	23,86	26.400
26	41,70	14.500	1-1/16"	28,02	31.900
28	48,40	17.000	1-1/8"	32,52	37.400
30	55,50	19.000	1-1/4"	37,30	41.800
32	63,20	21.125	1-5/16"	42,47	46.475
36	80,00	27.500	1-1/2"	53,76	60.500
40	98,70	34.000	1-5/8"	66,33	74.800
48	142,00	48.000	2"	95,42	105.600
56	193,00	68.000	2-1/4"	129,70	149.600
64	253,00	84.500	2-5/8"	170,02	185.900

* Unspliced Break Load (All tests are in Accordance with ISO 2307)



LUPA® TWIST ▲ CONVENTIONAL ROPES



CLASSIC
LOOK

LUPP® TWIST

APPLICATIONS

Other Fishing Line

BENEFITS / FEATURES

Does not Harden
Soft Hand
Economically Priced
Buoyant
Easy to Splice

SPECIFICATIONS

Material	: 100% HT Polypropylene Fiber
Type	: A
Specific Gravity	: 0,91 kg/dm ³
Construction	: 3 Strand Plaited
UV Resistance	: Sufficient
Chemical Resistance	: Very Good
Melting Point	: 165°C
Critical Temperature	: 80°C
Elongation at Break	: Approx. %23
Fiber Water Absorption	: None
Wet Abrasion	: Sufficient
Dry Abrasion	: Sufficient
Standard	: EN ISO 1346
Length	: 200 m Plastic/Wooden Spool or Coil

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
4	0,72	320	5/32"	0,48	704
5	1,13	480	3/16"	0,76	1.056
6	1,63	680	1/4"	1,10	1.496
8	2,89	1.200	5/16"	1,94	2.640
10	4,52	1.730	3/8"	3,04	3.806
12	6,51	2.550	1/2"	4,37	5.610
14	8,86	3.410	9/16"	5,95	7.502
16	11,60	4.330	5/8"	7,80	9.526
18	14,60	5.400	3/4"	9,81	11.880
20	18,10	6.500	13/16"	12,16	14.300
22	21,90	7.740	7/8"	14,72	17.028
24	26,00	9.180	1"	17,47	20.196
26	30,60	10.810	1-1/16"	20,56	23.782
28	35,40	12.900	1-1/8"	23,79	28.380
30	40,70	14.600	1-1/4"	27,35	32.120
32	46,30	16.400	1-5/16"	31,11	36.080
36	58,60	20.100	1-1/2"	39,38	44.220
40	72,30	24.300	1-5/8"	48,59	53.460
48	104,00	34.170	2"	69,89	75.174
56	142,00	44.600	2-1/4"	95,42	98.120
64	185,00	57.120	2-5/8"	124,32	125.664

* Unspliced Break Load (All tests are in Accordance with ISO 2307)



LUPP® TWIST FILM

APPLICATIONS

General Working Line
Tug Barge Tie-Up Line
Other Fishing Line

BENEFITS / FEATURES

Does not Harden
Soft Hand
Economically Priced
Buoyant
Easy to Splice



SPECIFICATIONS

Material	: 100% HT Polypropylene Film Fiber
Type	: A
Specific Gravity	: 0,91 kg/dm³
Construction	: 3 Strand Plaited
UV Resistance	: Sufficient
Chemical Resistance	: Very Good
Melting Point	: 165°C
Critical Temperature	: 80°C
Elongation at Break	: Approx. %23
Fiber Water Absorption	: None
Wet Abrasion	: Sufficient
Dry Abrasion	: Sufficient
Standard	: EN ISO 1346
Length	: 200-220 m Coil

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
8	2,89	1.040	5/16"	1,94	2.288
10	4,52	1.530	3/8"	3,04	3.366
12	6,51	2.170	1/2"	4,37	4.774
14	8,86	2.860	9/16"	5,95	6.292
16	11,60	3.850	5/8"	7,80	8.470
18	14,60	4.720	3/4"	9,81	10.384
20	18,10	5.800	13/16"	12,16	12.760
24	26,00	8.160	1"	17,47	17.952
28	35,40	10.820	1-1/8"	23,79	23.804
32	46,30	13.500	1-5/16"	31,11	29.700
36	58,60	17.350	1-1/2"	39,38	38.170

* Unspliced Break Load (All tests are in Accordance with ISO 2307)

LUPES® TWIST TRAWL

APPLICATIONS

Trawl/Bridle Line

BENEFITS / FEATURES

Quick Sink Rate
Durable



SPECIFICATIONS

Material	:	100% HT Polyester Fiber + 6X7 Galvanized Wire Rope
Type	:	A
Specific Gravity	:	-
Construction	:	3+1 Strand Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Good
Melting Point	:	256°C
Critical Temperature	:	170°C
Elongation at Break	:	Approx. %4-5
Fiber Water Absorption	:	Approx. %1-2
Wet Abrasion	:	Good
Dry Abrasion	:	Good
Standard	:	-
Length	:	Upon Request

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs)
30	75,00	-	1-1/4"	50,40	-
32	85,00	-	1-5/16"	57,12	-
32	100,00	-	1-5/16"	67,20	-



LUPES® TWIST TRAWL ▲ CONVENTIONAL ROPES





LUPES® CORD

APPLICATIONS

Other Fishing Line

BENEFITS / FEATURES

Outstanding Flexibility
Cost-Efficient
Low Stretch

SPECIFICATIONS

Material	:	Cover: HT Polyester Fiber Core: HT Polyester Fiber
Specific Gravity	:	1,38 kg/dm ³
Construction	:	Cover: 16 Plaited Core: Parallel Braided
UV Resistance	:	Excellent
Chemical Resistance	:	Good
Melting Point	:	256°C
Critical Temperature	:	170°C
Working Stretch	:	<5%
Fiber Water Absorption	:	Approx. %1-2
Wet Abrasion	:	Good
Length	:	100-200 m Plastic Spool

* Other Colours Upon Request

DIA (mm)	Weight (kg/100m)	B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	B.Load (lbs)
3	0,85	180	1/8"	0,57	396
4	1,20	300	5/32"	0,81	660
5	1,95	460	3/16"	1,31	1.012
6	2,70	660	1/4"	1,81	1.452

* Unspliced Break Load (All Tests are in Accordance with ISO 2307)

LUPA® CORD

APPLICATIONS

Trawl/Bridle Line

BENEFITS / FEATURES

Outstanding Flexibility
Cost-Efficient
Excellent Shock Absorption

SPECIFICATIONS

Material	:	Cover: HT Polyamide Fiber Core: HT Polyamide Fiber
Specific Gravity	:	1,14 kg/dm ³
Construction	:	Cover: 16 Plaited Core: Parallel Braided
UV Resistance	:	Very Good
Chemical Resistance	:	Good
Melting Point	:	218°C
Critical Temperature	:	130°C
Working Stretch	:	<12%
Fiber Water Absorption	:	Approx. %3-4
Wet Abrasion	:	Sufficient
Length	:	100-200 m Plastic Spool

* Other Colours Upon Request

DIA (mm)	Weight (kg/100m)	B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	B.Load (lbs)
3	0,70	200	1/8"	0,47	440
4	1,00	330	5/32"	0,67	726
5	1,60	500	3/16"	1,08	1.100
6	2,25	720	1/4"	1,51	1.584

* Unspliced Break Load (All Tests are in Accordance with ISO 2307)

LUPES® RUNNER

APPLICATIONS

Other Fishing Line

BENEFITS / FEATURES

Outstanding Flexibility
Cost-Efficient
Lowest Stretch in Standard Polyester

SPECIFICATIONS

Material	:	Cover: HT Polyester Fiber Core: HT Polyester Fiber
Specific Gravity	:	1,38 kg/dm ³
Construction	:	Cover: 16 Plaited Core: Parallel Yarn
UV Resistance	:	Excellent
Chemical Resistance	:	Good
Melting Point	:	256°C
Critical Temperature	:	170°C
Working Stretch	:	<4%
Fiber Water Absorption	:	Approx. %1-2
Wet Abrasion	:	Good
Length	:	100-200 m Plastic Spool

* Other Colours Upon Request

DIA (mm)	Weight (kg/100m)	B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	B.Load (lbs)
3	0,70	190	1/8"	0,47	418
4	1,00	390	5/32"	0,67	858
5	1,65	670	3/16"	1,11	1.474
6	2,75	870	1/4"	1,85	1.914

* Unspliced Break Load (All Tests are in Accordance with ISO 2307)

LUPP® CORD

APPLICATIONS

Other Fishing Line

BENEFITS / FEATURES

Outstanding Flexibility
Economically Priced
Low Stretch
Buoyant

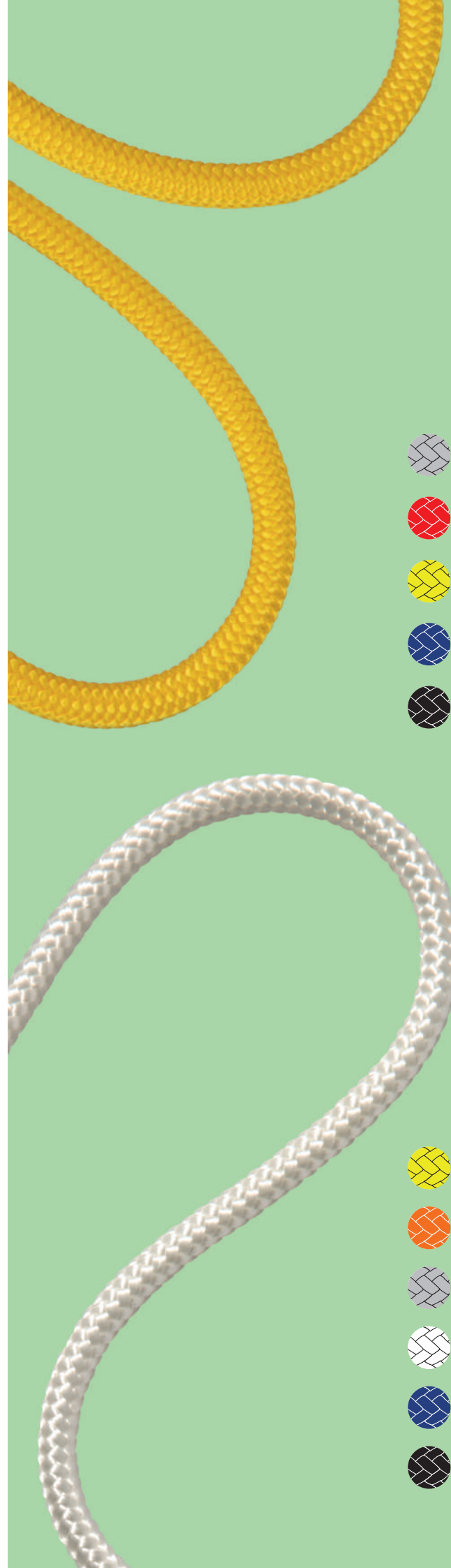
SPECIFICATIONS

Material	:	Cover: HT Polypropylene Fiber Core: HT Polypropylene Fiber
Specific Gravity	:	0,91 kg/dm ³
Construction	:	Cover: 16 Plaited, Core: Parallel Braided
UV Resistance	:	Sufficient
Chemical Resistance	:	Very Good
Melting Point	:	165°C
Critical Temperature	:	80°C
Working Stretch	:	<6%
Fiber Water Absorption	:	None
Wet Abrasion	:	Sufficient
Length	:	100-200 m Plastic Spool

* Other Colours Upon Request

DIA (mm)	Weight (kg/100m)	B.Load (kgf)	DIA (inch)	Weight (lbs/100ft)	B.Load (lbs)
4	0,70	250	5/32"	0,47	550
5	1,20	400	3/16"	0,81	880
6	1,60	550	1/4"	1,08	1.210

* Unspliced Break Load (All Tests are in Accordance with ISO 2307)



LUPES® RUNNER ▲ CONVENTIONAL ROPES

LUPP® CORD ▲ CONVENTIONAL ROPES

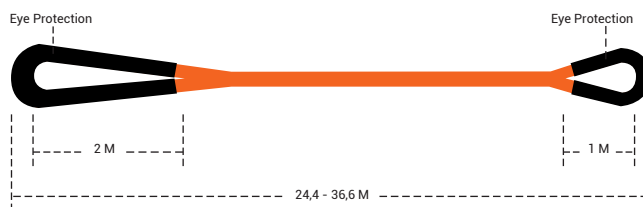
DYNE K® SL/P

APPLICATIONS

Tug Pendant

BENEFITS / FEATURES

Superior Abrasion Resistance
Excellent Breaking Load
Buoyant
Durable
Very Low Stretch
Lightweight



Standard **Single Leg Pendants (SL/P)** have a 2 meter soft eye on one end and a 1 meter soft eye on the other end.
1 meter eye is for mating to the mainline and a 2 meter soft eye is for the shipboard connection.

SPECIFICATIONS

Material	: Coated Dyneema® SK 75/78
Specific Gravity	: 0,97 kg/dm³
Construction	: 12 Strand Braided
UV Resistance	: Excellent
Chemical Resistance	: Excellent
Melting Point	: 147°C
Critical Temperature	: 65°C
Working Stretch	: <1,5%
Fiber Water Absorption	: None
Wet Abrasion	: Excellent
Dry Abrasion	: Excellent
Standard	: EN ISO 10325
Length	: Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/ 100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/ 100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
28	44,50	69.870	62.715	1-1/8"	29,90	153.714	137.973
32	57,50	88.230	79.540	1-5/16"	38,64	194.106	174.988
36	72,20	109.140	98.405	1-1/2"	48,52	240.108	216.491
40	88,40	131.070	117.780	1-5/8"	59,40	288.354	259.116
44	106,20	155.550	140.215	1-3/4"	71,37	342.210	308.473
48	125,50	181.050	163.155	2"	84,34	398.310	358.941
52	146,40	208.590	187.630	2-1/8"	98,38	458.898	412.786
56	168,80	237.660	213.635	2-1/4"	113,43	522.852	469.997
60	192,80	268.770	241.675	2-1/2"	129,56	591.294	531.685
64	218,30	300.900	270.735	2-5/8"	146,70	661.980	595.617
72	273,80	370.770	333.450	3"	183,99	815.694	733.590
76	303,80	408.000	367.200	3-1/8"	204,15	897.600	807.840
80	335,30	446.250	401.780	3-1/4"	225,32	981.750	883.916
88	402,80	528.360	475.190	3-5/8"	270,68	1.162.392	1.045.418
96	476,20	616.080	554.220	4"	320,01	1.355.376	1.219.284

* Spliced Break Load (All tests are in Accordance with ISO 2307)



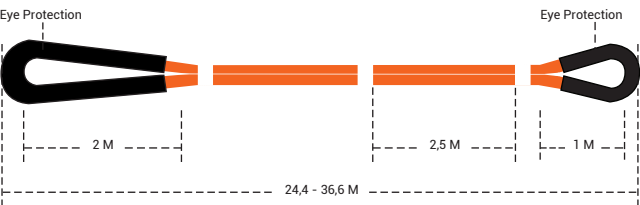
DYNE K® GR/P

APPLICATIONS

Tug Pendant

BENEFITS / FEATURES

- Superior Abrasion Resistance
- Excellent Breaking Load
- Buoyant
- Durable
- Very Low Stretch
- Lightweight



Standard **Grommet Pendants (GR/P)** have a 2 meter soft eye on one end and a 1 meter soft eye on the other end.
1 meter eye is for mating to the mainline and a 2 meter soft eye is for the shipboard connection.
Grommet strength is 1.6x the single leg rope strength.

SPECIFICATIONS

Material	: Coated Dyneema® SK 75/78
Specific Gravity	: 0,97 kg/dm³
Construction	: 12 Strand Braided
UV Resistance	: Excellent
Chemical Resistance	: Excellent
Melting Point	: 147°C
Critical Temperature	: 65°C
Working Stretch	: <1,5%
Fiber Water Absorption	: None
Wet Abrasion	: Excellent
Dry Abrasion	: Excellent
Standard	: EN ISO 10325
Length	: Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Min. B.Load (kgf) Spliced	DIA (inch)	Min. B.Load (lbs) Spliced
28	100.344	1-1/8"	220.757
32	127.264	1-5/16"	279.981
36	157.448	1-1/2"	346.386
40	188.448	1-5/8"	414.586
44	224.344	1-3/4"	493.557
48	261.048	2"	574.306
52	300.208	2-1/8"	660.458
56	341.816	2-1/4"	751.995
60	386.680	2-1/2"	850.696
64	433.176	2-5/8"	952.987
72	533.520	3"	1.173.744
76	587.520	3-1/8"	1.292.544
80	642.848	3-1/4"	1.414.266
88	760.304	3-5/8"	1.672.669
96	886.752	4"	1.950.854

* Spliced Break Load (All tests are in Accordance with ISO 2307)



DYNE K® GROMMET PENDANT (GR/P) ▶ PENDANTS



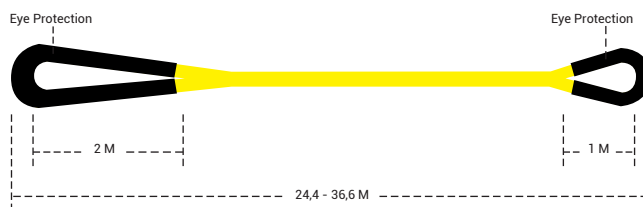
FORCE K® MAX SL/P

APPLICATIONS

Tug Pendant

BENEFITS / FEATURES

Superior Abrasion Resistance
Excellent Breaking Load
Buoyant
Durable
Very Low Stretch
Lightweight



Standard **Single Leg Pendants (SL/P)** have a 2 meter soft eye on one end and a 1 meter soft eye on the other end.
1 meter eye is for mating to the mainline and a 2 meter soft eye is for the shipboard connection.

SPECIFICATIONS

Material	: Coated UHMWPE Fiber
Specific Gravity	: 0,97 kg/dm ³
Construction	: 12 Strand Braided
UV Resistance	: Excellent
Chemical Resistance	: Excellent
Melting Point	: 147°C
Critical Temperature	: 65°C
Working Stretch	: <1,5%
Fiber Water Absorption	: None
Wet Abrasion	: Excellent
Dry Abrasion	: Excellent
Standard	: EN ISO 10325
Length	: Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
28	44,50	69.870	62.715	1-1/8"	29,90	153.714	137.973
32	57,50	88.230	79.540	1-5/16"	38,64	194.106	174.988
36	72,20	109.140	98.405	1-1/2"	48,52	240.108	216.491
40	88,40	131.070	117.780	1-5/8"	59,40	288.354	259.116
44	106,20	155.550	140.215	1-3/4"	71,37	342.210	308.473
48	125,50	181.050	163.155	2"	84,34	398.310	358.941
52	146,40	208.590	187.630	2-1/8"	98,38	458.898	412.786
56	168,80	237.660	213.635	2-1/4"	113,43	522.852	469.997
60	192,80	268.770	241.675	2-1/2"	129,56	591.294	531.685
64	218,30	300.900	270.735	2-5/8"	146,70	661.980	595.617
72	273,80	370.770	333.450	3"	183,99	815.694	733.590
76	303,80	408.000	367.200	3-1/8"	204,15	897.600	807.840
80	335,30	446.250	401.780	3-1/4"	225,32	981.750	883.916
88	402,80	528.360	475.190	3-5/8"	270,68	1.162.392	1.045.418
96	476,20	616.080	554.220	4"	320,01	1.355.376	1.219.284

* Spliced Break Load (All tests are in Accordance with ISO 2307)



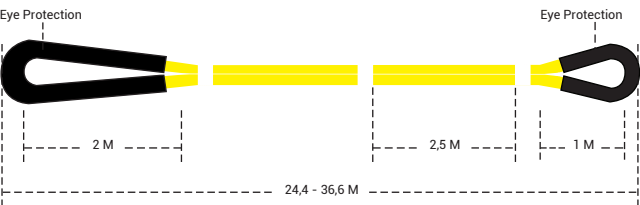
FORCE K® MAX GR/P

APPLICATIONS

Tug Pendant

BENEFITS / FEATURES

- Superior Abrasion Resistance
- Excellent Breaking Load
- Buoyant
- Durable
- Very Low Stretch
- Lightweight



Standard **Grommet Pendants (GR/P)** have a 2 meter soft eye on one end and a 1 meter soft eye on the other end.
1 meter eye is for mating to the mainline and a 2 meter soft eye is for the shipboard connection.
Grommet strength is 1.6x the single leg rope strength.

SPECIFICATIONS

Material	: Coated UHMWPE Fiber
Specific Gravity	: 0,97 kg/dm ³
Construction	: 12 Strand Braided
UV Resistance	: Excellent
Chemical Resistance	: Excellent
Melting Point	: 147°C
Critical Temperature	: 65°C
Working Stretch	: <1,5%
Fiber Water Absorption	: None
Wet Abrasion	: Excellent
Dry Abrasion	: Excellent
Standard	: EN ISO 10325
Length	: Upon Request

* Other Colours & Larger Diameters Upon Request

DIA (mm)	Min. B.Load (kgf) Spliced	DIA (inch)	Min. B.Load (lbs) Spliced
28	100.344	1-1/8"	220.757
32	127.264	1-5/16"	279.981
36	157.448	1-1/2"	346.386
40	188.448	1-5/8"	414.586
44	224.344	1-3/4"	493.557
48	261.048	2"	574.306
52	300.208	2-1/8"	660.458
56	341.816	2-1/4"	751.995
60	386.680	2-1/2"	850.696
64	433.176	2-5/8"	952.987
72	533.520	3"	1.173.744
76	587.520	3-1/8"	1.292.544
80	642.848	3-1/4"	1.414.266
88	760.304	3-5/8"	1.672.669
96	886.752	4"	1.950.854

* Spliced Break Load (All tests are in Accordance with ISO 2307)



FORCE K® MAX GROMMET PENDANT (GR/P) PENDANTS



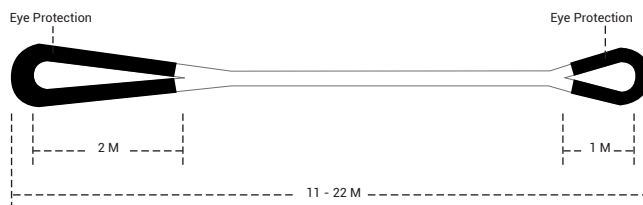
LUPA® ROUND SL/P

APPLICATIONS

Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
High Breaking Load
Excellent Shock Absorption
Easy to Splice



Standard **Single Leg Pendants (SL/P)** have a 2 meter soft eye on one end and a 1 meter soft eye on the other end.

Per OCIMF Guidelines, polyamide mooring pendants should have a 37% higher minimum breaking strength than the mooring line.

It is recommended to retire mooring pendants after 18 months of use, or prior to residual months of use, or prior to residual strength reduction to 60% of the original minimum breaking strength.

SPECIFICATIONS

Material	: 100% HT Polyamide Fiber
Type	: T
Specific Gravity	: 1,14 kg/dm ³
Construction	: 12 Strand Plaited
UV Resistance	: Very Good
Chemical Resistance	: Good
Melting Point	: 218°C
Critical Temperature	: 130°C
Elongation at Break	: Approx. %30-35
Fiber Water Absorption	: Approx. %3-4
Wet Abrasion	: Sufficient
Dry Abrasion	: Good
Standard	: EN ISO 1140
Length	: Upon Request

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
40	100,00	34.000	30.600	1-5/8"	67,20	74.800	67.320
42	110,50	37.500	33.750	1-11/16"	74,26	82.500	74.250
44	121,00	41.000	36.900	1-3/4"	81,31	90.200	81.180
46	132,50	44.500	40.050	1-13/16"	89,04	97.900	88.110
48	144,20	48.000	43.200	2"	96,90	105.600	95.040
52	170,00	58.000	52.200	2-1/8"	114,24	127.600	114.840
56	197,00	68.000	61.200	2-1/4"	132,38	149.600	134.640
60	226,00	76.250	68.625	2-1/2"	151,87	167.750	150.975
64	257,00	84.500	76.050	2-5/8"	172,70	185.900	167.310
72	325,00	110.000	99.000	3"	218,40	242.000	217.800
80	401,00	129.000	116.100	3-1/4"	269,47	283.800	255.420
88	486,00	152.000	136.800	3-5/8"	326,59	334.400	300.960
96	578,00	183.000	164.700	4"	388,41	402.600	362.340

* Spliced Break Load (All tests are in Accordance with ISO 2307)

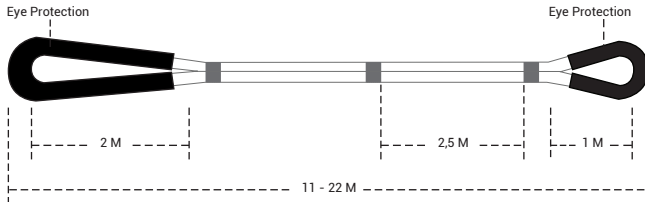
LUPA® ROUND GR/P

APPLICATIONS

Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
High Breaking Load
Excellent Shock Absorption
Easy to Splice



Standard **Grommet Pendants (GR/P)** have a 2 meter soft eye on one end and a 1 meter soft eye on the other end. Grommet strength is 1.6x the single leg rope strength. Per OCIMF Guidelines, polyamide mooring pendants should have a 37% higher minimum breaking strength than the mooring line. It is recommended to retire mooring pendants after 18 months of use, or prior to residual months of use, or prior to residual strength reduction to 60% of the original minimum breaking strength.

SPECIFICATIONS

Material	: 100% HT Polyamide Fiber
Type	: T
Specific Gravity	: 1,14 kg/dm ³
Construction	: 12 Strand Plaited
UV Resistance	: Very Good
Chemical Resistance	: Good
Melting Point	: 218°C
Critical Temperature	: 130°C
Elongation at Break	: Approx. %30-35
Fiber Water Absorption	: Approx. %3-4
Wet Abrasion	: Sufficient
Dry Abrasion	: Good
Standard	: EN ISO 1140
Length	: Upon Request

* Other Colours on Request

DIA (mm)	Min. B.Load (kgf) Spliced	DIA (inch)	Min. B.Load (lbs) Spliced
32	30.400	1-5/16"	66.880
36	39.600	1-1/2"	87.120
40	48.960	1-5/8"	107.712
44	59.040	1-3/4"	129.888
48	69.120	2"	152.064
52	83.520	2-1/8"	183.744
56	97.920	2-1/4"	215.424
60	109.800	2-1/2"	241.560
64	121.680	2-5/8"	267.696
72	158.400	3"	348.480
80	185.760	3-1/4"	408.672
88	218.880	3-5/8"	481.536
96	263.520	4"	579.744

* Spliced Break Load (All tests are in Accordance with ISO 2307)

LUPA® ROUND GROMMET PENDANT (GR/P) ▲ PENDANTS



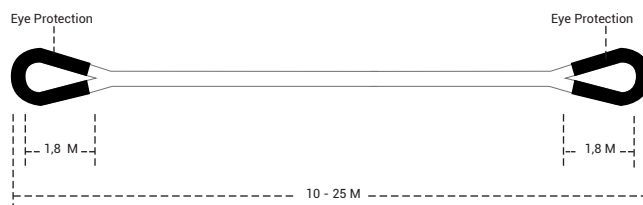
LUPA® ROUND SL/S

APPLICATIONS

Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
High Breaking Load
Excellent Shock Absorption
Easy to Splice



The breaking strength of polyamide **Single Leg Shock Line (SL/S)** needs to be 1,5 times the breaking strength of the main towing line. Polyamide ropes are extremely elastic and stretch out the operational life of tow lines. Their high elasticity enables them to absorb the shock loads that occur during tugging operations.

SPECIFICATIONS

Material	: 100% HT Polyamide Fiber
Type	: T
Specific Gravity	: 1,14 kg/dm ³
Construction	: 12 Strand Plaited
UV Resistance	: Very Good
Chemical Resistance	: Good
Melting Point	: 218°C
Critical Temperature	: 130°C
Elongation at Break	: Approx. %30-35
Fiber Water Absorption	: Approx. %3-4
Wet Abrasion	: Sufficient
Dry Abrasion	: Good
Standard	: EN ISO 1140
Length	: Upon Request

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
40	100,00	34.000	30.600	1-5/8"	67,20	74.800	67.320
42	110,50	37.500	33.750	1-11/16"	74,26	82.500	74.250
44	121,00	41.000	36.900	1-3/4"	81,31	90.200	81.180
46	132,50	44.500	40.050	1-13/16"	89,04	97.900	88.110
48	144,20	48.000	43.200	2"	96,90	105.600	95.040
52	170,00	58.000	52.200	2-1/8"	114,24	127.600	114.840
56	197,00	68.000	61.200	2-1/4"	132,38	149.600	134.640
60	226,00	76.250	68.625	2-1/2"	151,87	167.750	150.975
64	257,00	84.500	76.050	2-5/8"	172,70	185.900	167.310
72	325,00	110.000	99.000	3"	218,40	242.000	217.800
80	401,00	129.000	116.100	3-1/4"	269,47	283.800	255.420
88	486,00	152.000	136.800	3-5/8"	326,59	334.400	300.960
96	578,00	183.000	164.700	4"	388,41	402.600	362.340

* Spliced Break Load (All tests are in Accordance with ISO 2307)

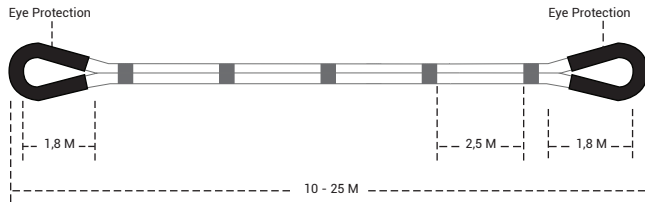
LUPA® ROUND GR/S

APPLICATIONS

Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
High Breaking Load
Excellent Shock Absorption
Easy to Splice



The breaking strength of polyamide **Grommet Shock Line (GR/S)** needs to be 1,5 times the breaking strength of the main towing line. Grommet strength is 1.6x the single leg rope strength. Polyamide ropes are extremely elastic and stretch out the operational life of tow lines. Their high elasticity enables them to absorb the shock loads that occur during tugging operations.

SPECIFICATIONS

Material	: 100% HT Polyamide Fiber
Type	: T
Specific Gravity	: 1,14 kg/dm ³
Construction	: 12 Strand Plaited
UV Resistance	: Very Good
Chemical Resistance	: Good
Melting Point	: 218°C
Critical Temperature	: 130°C
Elongation at Break	: Approx. %30-35
Fiber Water Absorption	: Approx. %3-4
Wet Abrasion	: Sufficient
Dry Abrasion	: Good
Standard	: EN ISO 1140
Length	: Upon Request

* Other Colours on Request

DIA (mm)	Min. B.Load (kgf) Spliced	DIA (inch)	Min. B.Load (lbs) Spliced
32	30.400	1-5/16"	66.880
36	39.600	1-1/2"	87.120
40	48.960	1-5/8"	107.712
44	59.040	1-3/4"	129.888
48	69.120	2"	152.064
52	83.520	2-1/8"	183.744
56	97.920	2-1/4"	215.424
60	109.800	2-1/2"	241.560
64	121.680	2-5/8"	267.696
72	158.400	3"	348.480
80	185.760	3-1/4"	408.672
88	218.880	3-5/8"	481.536
96	263.520	4"	579.744

* Spliced Break Load (All tests are in Accordance with ISO 2307)



LUPA® ROUND GROMMET SHOCK LINE (GR/S) SHOCK LINES



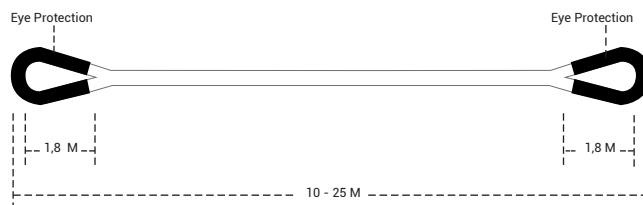
LUPES® VIPERA SL/S

APPLICATIONS

Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
Flexible Cover
High Breaking Load
Excellent Abrasion Resistance



The breaking strength of polyester **Single Leg Shock Line (SL/S)** needs to be 1,5 times the breaking strength of the main towing line. Polyester ropes are extremely elastic and stretch out the operational life of tow lines. Their high elasticity enables them to absorb the shock loads that occur during tugging operations.

SPECIFICATIONS

Material	: 100% HT Polyester Fiber
Type	: -
Specific Gravity	: 1,38 kg/dm ³
Construction	: Cover: 24-32 Plaited Core: 12-16 Plaited
UV Resistance	: Excellent
Chemical Resistance	: Good
Melting Point	: 256°C
Critical Temperature	: 170°C
Elongation at Break	: Approx. %15
Fiber Water Absorption	: Approx. %1-2
Wet Abrasion	: Good
Dry Abrasion	: Good
Standart	: EN ISO 10547
Length	: Upon Request

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
32	81,60	21.420	19.278	1-5/16"	54,84	47.124	42.412
36	103,00	26.928	24.235	1-1/2"	69,22	59.242	53.317
40	128,00	33.048	29.743	1-5/8"	86,02	72.706	65.435
44	154,00	39.678	35.710	1-3/4"	103,49	87.292	78.562
48	184,00	46.920	42.228	2"	123,65	103.224	92.902
52	216,00	54.774	49.297	2-1/8"	145,15	120.503	108.453
56	250,00	63.036	56.732	2-1/4"	168,00	138.679	124.811
60	287,00	72.114	64.903	2-1/2"	192,86	158.651	142.786
64	326,00	81.600	73.440	2-5/8"	219,07	179.520	161.568
72	413,00	102.000	91.800	3"	277,54	224.400	201.960

* Spliced Break Load (All tests are in Accordance with ISO 2307)

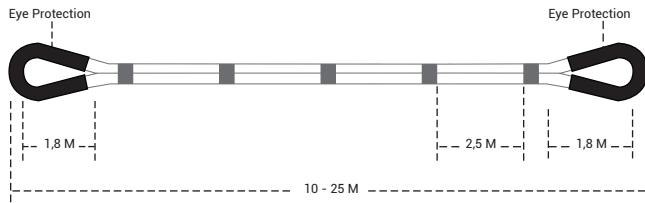
LUPES® VIPERA GR/S

APPLICATIONS

Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
Flexible Cover
High Breaking Load
Excellent Abrasion Resistance



The breaking strength of polyester **Grommet Shock Line (GR/S)** needs to be 1,5 times the breaking strength of the main towing line. Grommet strength is 1.6x the single leg rope strength. Polyester ropes are extremely elastic and stretch out the operational life of tow lines. Their high elasticity enables them to absorb the shock loads that occur during tugging operations.

SPECIFICATIONS

Material	: 100% HT Polyester Fiber
Type	: -
Specific Gravity	: 1,38 kg/dm³
Construction	: Cover: 24-32 Plaited Core: 12-16 Plaited
UV Resistance	: Excellent
Chemical Resistance	: Good
Melting Point	: 256°C
Critical Temperature	: 170°C
Elongation at Break	: Approx. %15
Fiber Water Absorption	: Approx. %1-2
Wet Abrasion	: Good
Dry Abrasion	: Good
Standart	: EN ISO 10547
Length	: Upon Request

* Other Colours on Request

DIA (mm)	Min. B.Load (kgf) Spliced	DIA (inch)	Min. B.Load (lbs) Spliced
26	20.710	1-1/16"	45.562
28	23.941	1-1/8"	52.670
30	27.320	1-1/4"	60.104
32	30.845	1-5/16"	67.859
36	38.776	1-1/2"	85.308
40	47.589	1-5/8"	104.696
44	57.136	1-3/4"	125.700
48	67.565	2"	148.643
52	78.875	2-1/8"	173.524
56	90.772	2-1/4"	199.698
60	103.844	2-1/2"	228.457
64	117.504	2-5/8"	258.509
72	146.880	3"	323.136

* Spliced Break Load (All tests are in Accordance with ISO 2307)

LUPES® VIPERA GROMMET SHOCK LINE (GR/S) ▶ SHOCK LINES



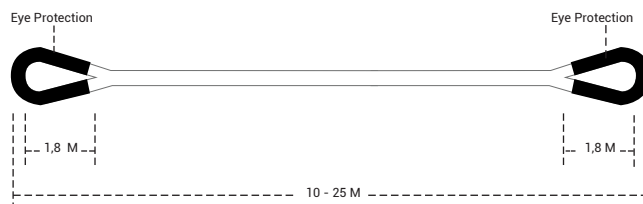
LUPA® VIPERA SL/S

APPLICATIONS

Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
Flexible Cover
High Breaking Load
Excellent Shock Absorption



The breaking strength of polyamide **Single Leg Shock Line (SL/S)** needs to be 1,5 times the breaking strength of the main towing line. Polyamide ropes are extremely elastic and stretch out the operational life of tow lines. Their high elasticity enables them to absorb the shock loads that occur during tugging operations.

SPECIFICATIONS

Material	: 100% HT Polyamide Fiber
Type	: -
Specific Gravity	: 1,14 kg/dm ³
Construction	: Cover: 24-32 Plaited Core: 12-16 Plaited
UV Resistance	: Very Good
Chemical Resistance	: Good
Melting Point	: 218°C
Critical Temperature	: 130°C
Elongation at Break	: Approx. %30
Fiber Water Absorption	: Approx. %3-4
Wet Abrasion	: Sufficient
Dry Abrasion	: Good
Standard	: EN ISO 10554
Length	: Upon Request

* Other Colours on Request

DIA (mm)	Weight (kg/100m)	Min. B.Load (kgf) Unspliced	Min. B.Load (kgf) Spliced	DIA (inch)	Weight (lbs/100ft)	Min. B.Load (lbs) Unspliced	Min. B.Load (lbs) Spliced
32	63,70	22.338	20.104	1-5/16"	42,81	49.144	44.229
36	80,60	28.254	25.429	1-1/2"	54,16	62.159	55.943
40	99,50	34.782	31.304	1-5/8"	66,86	76.520	68.868
44	120,00	42.024	37.822	1-3/4"	80,64	92.453	83.208
48	143,00	49.980	44.982	2"	96,10	109.956	98.960
52	168,00	58.548	52.693	2-1/8"	112,90	128.806	115.925
56	195,00	67.830	61.047	2-1/4"	131,04	149.226	134.303
60	224,00	77.724	69.952	2-1/2"	150,53	170.993	153.894
64	255,00	88.434	79.591	2-5/8"	171,36	194.555	175.099
72	322,00	112.200	100.980	3"	216,38	246.840	222.156

* Spliced Break Load (All tests are in Accordance with ISO 2307)

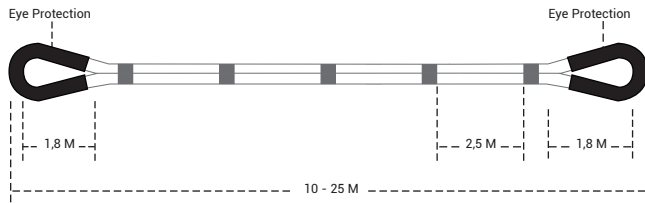
LUPA® VIPERA GR/S

APPLICATIONS

Vessel Pendant
Tug Shock Line

BENEFITS / FEATURES

Does not Harden
Does not Kink
Soft Hand
Durable
Flexible Cover
High Breaking Load
Excellent Shock Absorption



The breaking strength of polyamide **Grommet Shock Line (GR/S)** needs to be 1,5 times the breaking strength of the main towing line. Grommet strength is 1.6x the single leg rope strength. Polyamide ropes are extremely elastic and stretch out the operational life of tow lines. Their high elasticity enables them to absorb the shock loads that occur during tugging operations.

SPECIFICATIONS

Material	: 100% HT Polyamide Fiber
Type	: -
Specific Gravity	: 1,14 kg/dm ³
Construction	: Cover: 24-32 Plaited Core: 12-16 Plaited
UV Resistance	: Very Good
Chemical Resistance	: Good
Melting Point	: 218°C
Critical Temperature	: 130°C
Elongation at Break	: Approx. %30
Fiber Water Absorption	: Approx. %3-4
Wet Abrasion	: Sufficient
Dry Abrasion	: Good
Standard	: EN ISO 10554
Length	: Upon Request

* Other Colours on Request

DIA (mm)	Min. B.Load (kgf) Spliced	DIA (inch)	Min. B.Load (lbs) Spliced
26	21.298	1-1/16"	46.856
28	24.675	1-1/8"	54.285
30	28.347	1-1/4"	62.363
32	32.167	1-5/16"	70.767
36	40.686	1-1/2"	89.509
40	50.086	1-5/8"	110.189
44	60.515	1-3/4"	133.132
48	71.971	2"	158.337
52	84.309	2-1/8"	185.480
56	97.675	2-1/4"	214.885
60	111.923	2-1/2"	246.230
64	127.345	2-5/8"	280.159
72	161.568	3"	355.450

* Spliced Break Load (All tests are in Accordance with ISO 2307)

LUPA® VIPERA GROMMET SHOCK LINE (GR/S) ▲ SHOCK LINES



DYNE K® SHACKLE

APPLICATIONS

Connection Line

BENEFITS / FEATURES

Can be Opened and Closed Quickly
Buoyant
Very Low Stretch
Self-Locking Under Load
Easy to Use
Extremely Durable

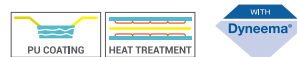
SPECIFICATIONS

Material	:	Coated Dyneema® SK75/78 Fiber
Specific Gravity	:	0,97 kg/dm ³
Construction	:	12 Strand Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	<1,5%
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	-
Length	:	-

* Other Colours & Larger Diameters Upon Request

Shackle Dia (mm)	Rope Dia (mm)	Total Length In Closed Condition (cm)	Weight (kg)	Minimum B.load (kgf)	Weight (kg)	Minimum B.load (kgf)	Weight (kg)	Minimum B.load (kgf)
			Shackle-1		Shackle-2		Shackle-3	
12	7	12,5	0,03	5.000	0,05	11.250	0,07	16.900
14	8	15,0	0,05	6.330	0,07	14.250	0,11	21.400
18	10	17,5	0,09	9.700	0,13	21.830	0,20	32.790
20	12	20,0	0,14	13.770	0,21	30.990	0,32	46.550
24	14	35,0	0,33	18.360	0,49	41.310	0,75	62.060
28	16	40,0	0,49	23.455	0,73	52.780	1,12	79.280
32	18	45,0	0,68	29.065	1,03	65.400	1,57	98.240
34	20	50,0	0,93	34.675	1,40	78.020	2,14	117.210
36	22	55,0	1,23	41.300	1,85	92.930	2,83	139.600
40	24	60,0	1,59	47.930	2,38	107.850	3,65	162.010
44	26	65,0	2,01	55.065	3,01	123.900	4,62	186.120
48	28	70,0	2,49	62.715	3,74	141.110	5,73	211.980
50	30	75,0	3,05	71.385	4,57	160.620	7,01	241.290
54	32	80,0	3,68	79.540	5,52	178.970	8,46	268.850
58	34	85,0	4,39	88.720	6,59	199.620	10,10	299.880
60	36	90,0	5,20	98.405	7,80	221.420	11,96	332.610
64	38	95,0	6,09	108.090	9,13	243.210	14,00	365.350
68	40	100,0	7,07	117.780	10,61	265.010	16,27	398.100
72	42	110,0	8,54	128.980	12,80	290.210	19,63	435.960

* Spliced Break Load (All tests are in Accordance with ISO 2307)



FORCE K[®] SHACKLE

APPLICATIONS

Connection Line

BENEFITS / FEATURES

Can be Opened and Closed Quickly
Buoyant
Very Low Stretch
Self-Locking Under Load
Easy to Use
Extremely Durable

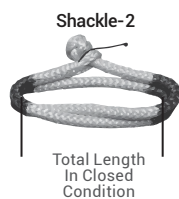
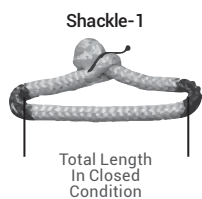
SPECIFICATIONS

Material	: Coated UHMWPE Fiber
Specific Gravity	: 0,97 kg/dm ³
Construction	: 12 Strand Plaited
UV Resistance	: Excellent
Chemical Resistance	: Excellent
Melting Point	: 147°C
Critical Temperature	: 65°C
Working Stretch	: <1,5%
Wet Abrasion	: Excellent
Dry Abrasion	: Excellent
Standard	: -
Length	: -

* Other Colours & Larger Diameters Upon Request

Shackle Dia (mm)	Rope Dia (mm)	Total Length In Closed Condition (cm)	Weight (kg)	Minimum B.load (kgf)	Weight (kg)	Minimum B.load (kgf)	Weight (kg)	Minimum B.load (kgf)
			Shackle-1		Shackle-2		Shackle-3	
12	7	12,5	0,03	5.000	0,05	11.250	0,07	16.900
14	8	15,0	0,05	6.330	0,07	14.250	0,11	21.400
18	10	17,5	0,09	9.700	0,13	21.830	0,20	32.790
20	12	20,0	0,14	13.770	0,21	30.990	0,32	46.550
24	14	35,0	0,33	18.360	0,49	41.310	0,75	62.060
28	16	40,0	0,49	23.455	0,73	52.780	1,12	79.280
32	18	45,0	0,68	29.065	1,03	65.400	1,57	98.240
34	20	50,0	0,93	34.675	1,40	78.020	2,14	117.210
36	22	55,0	1,23	41.300	1,85	92.930	2,83	139.600
40	24	60,0	1,59	47.930	2,38	107.850	3,65	162.010
44	26	65,0	2,01	55.065	3,01	123.900	4,62	186.120
48	28	70,0	2,49	62.715	3,74	141.110	5,73	211.980
50	30	75,0	3,05	71.385	4,57	160.620	7,01	241.290
54	32	80,0	3,68	79.540	5,52	178.970	8,46	268.850
58	34	85,0	4,39	88.720	6,59	199.620	10,10	299.880
60	36	90,0	5,20	98.405	7,80	221.420	11,96	332.610
64	38	95,0	6,09	108.090	9,13	243.210	14,00	365.350
68	40	100,0	7,07	117.780	10,61	265.010	16,27	398.100
72	42	110,0	8,54	128.980	12,80	290.210	19,63	435.960

* Spliced Break Load (All tests are in Accordance with ISO 2307)



FORCE K[®] SHACKLE ▲ SHACKLES



DYNE COVER USA

APPLICATIONS

Chafe Protection

BENEFITS / FEATURES

Superior Abrasion Resistance
Cut Resistant
UV Resistant
Lightweight
Wet & Dry Protection

SPECIFICATIONS

Material	:	Coated Dyneema® SK75/78 Fiber
Specific Gravity	:	0,97 kg/dm ³
Construction	:	24-32 Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	-
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	-
Length	:	Standard Length is 365 cm

* Other Colours & Larger Diameters Upon Request

Size	Rope Dia (mm)	Cover Splices Dia(mm)	Rope Dia (inch)	Cover Splices Dia (inch)
DC10	12-16	10-14	1/2"—5/8"	3/8"—9/16"
DC14	18-22	14-16	3/4"—7/8"	9/16"—5/8"
DC16	24-26	16-18	1"—1-1/16"	5/8"—3/4"
DC18	28-30	18-21	1-1/8"—1-1/4"	3/4"—53/64"
DC21	32-36	21-32	1-5/16"—1-1/2"	53/64"—1-5/16"
DC32	44-52	32-42	1-3/4"—2-1/8"	1-5/16"—1-11/16"
DC42	72	42-64	3"	1-11/16"—2-5/8"



FORCE COVER USA

APPLICATIONS

Chafe Protection

BENEFITS / FEATURES

- Superior Abrasion Resistance
- Cut Resistant
- UV Resistant
- Lightweight
- Wet & Dry Protection

SPECIFICATIONS

Material	:	Coated UHMWPE Fiber
Specific Gravity	:	0,97 kg/dm ³
Construction	:	24-32 Plaited
UV Resistance	:	Excellent
Chemical Resistance	:	Excellent
Melting Point	:	147°C
Critical Temperature	:	65°C
Working Stretch	:	-
Wet Abrasion	:	Excellent
Dry Abrasion	:	Excellent
Standard	:	-
Length	:	Standard Length is 365 cm

* Other Colours & Larger Diameters Upon Request

Size	Rope Dia (mm)	Cover Splices Dia(mm)	Rope Dia (inch)	Cover Splices Dia (inch)
FC10	12-16	10-14	1/2"-5/8"	3/8"-9/16"
FC14	18-22	14-16	3/4"-7/8"	9/16"-5/8"
FC16	24-26	16-18	1"-1-1/16"	5/8"-3/4"
FC18	28-30	18-21	1-1/8"-1-1/4"	3/4"-53/64"
FC21	32-36	21-32	1-5/16"-1-1/2"	53/64"-1-5/16"
FC32	44-52	32-42	1-3/4"-2-1/8"	1-5/16"-1-11/16"
FC42	72	42-64	3"	1-11/16"-2-5/8"



FORCE COVER USA ▲ CHAFE GEARS





LUPES® COVER

APPLICATIONS

Chafe Protection

BENEFITS / FEATURES

Excellent Abrasion Resistance
Cut Resistant
Durable
Flexible

Our "tightly braided" HT Polyester cover is very strong and durable, which is designed and developed to protect your rope from abrasion that is usually caused by repetitive motion against unsympathetic contact surfaces. Even little bit of friction can damage unprotected lines. This particular product we have offers an economical solution against abrasion.

SPECIFICATIONS

Material : 100% HT Polyester Fiber
Length : Standard Length is 365 cm

* Other Colours on Request

Size	Rope Dia (mm)	Cover Splices Dia (mm)	Standard Length (cm)	Rope Dia (inch)	Cover Splices Dia (inch)	Standard Length (Feet)
A	24-30	14-16	365	1"-1-1/4"	9/16"-5/8"	12,00
B	32-44	18-24	365	1-5/16"-1-3/4"	3/4-1"	12,00
C	45-60	28-34	365	1-7/8" -2-1/2"	1-1/8"-1-3/8"	12,00
D	64-76	36-44	365	2-5/8"-3-1/8"	1-1/2"-1-3/4"	12,00
E	80-104	46-56	365	3-1/4"-4-1/4"	1-7/8"-2-3/8"	12,00

LUPA® COVER

APPLICATIONS

Chafe Protection

BENEFITS / FEATURES

Very Good Abrasion Resistance
Cut Resistant
Durable
Flexible

One of our premium covers that is made out of HT Polyamide fiber. This product offers a really good protection against abrasion, which makes it ideal chafe guard to keep your rope in a perfect shape for a long period of time.

SPECIFICATIONS

Material : 100% HT Polyamide Fiber
Length : Standard Length is 365 cm

* Other Colours on Request

Size	Rope Dia (mm)	Cover Splices Dia (mm)	Standard Length (cm)	Rope Dia (inch)	Cover Splices Dia (inch)	Standard Length (Feet)
A	24-30	14-16	365	1"-1-1/4"	9/16"-5/8"	12,00
B	32-44	18-24	365	1-5/16"-1-3/4"	3/4-1"	12,00
C	45-60	28-34	365	1-7/8" -2-1/2"	1-1/8"-1-3/8"	12,00
D	64-76	36-44	365	2-5/8"-3-1/8"	1-1/2"-1-3/4"	12,00
E	80-104	46-56	365	3-1/4"-4-1/4"	1-7/8"-2-3/8"	12,00



POLYESTER GUARD

APPLICATIONS

Chafe Protection

BENEFITS / FEATURES

Good Abrasion Resistance
Easy to Install & Remove
High Flexibility
Mildew Resistant

Polyester woven sleeve is strong, resistant to UV light and chemicals, kind on the hands and stretches just moderately when loaded and ideal for protecting spliced eyes. This is the fabric to choose in any application where ultimate performance or minimum weight is not absolutely essential. It is available in different colors.

SPECIFICATIONS

Material : 100% HT Polyester Fabric + Velcro Strip
Length : Standard Length is 365 cm

* Other Colours on Request

Size	Rope Dia (mm)	Thickness Polyester Guard (mm)	Standard Length (cm)	Rope Dia (inch)	Thickness Polyester Guard (inch)	Standard Length (Feet)
A	24-30	1,5	365	1"-1-1/2"	1/16"	12,00
B	32-44	1,5	365	1-5/8"-2-1/8"	1/16"	12,00
C	45-60	1,5	365	2-1/4"-2-5/8"	1/16"	12,00
D	64-76	1,5	365	2-3/4"-3-1/4"	1/16"	12,00

CORDURA® GUARD

APPLICATIONS

Chafe Protection

BENEFITS / FEATURES

Very Good Abrasion Resistance
Mildew Resistant
Easy to Install & Remove
High Flexibility

Cordura® Guard is a woven product that is known for its durability and resistance to abrasion, tear and scuff. Cordura® is a high strength, cut resistant nylon fabric that is great for adding abrasion resistance to marine ropes used in tough conditions. This particular material has twice the abrasion resistance of standard nylon and three times the abrasion resistance of polyester. It is available in removable velcro strip.

SPECIFICATIONS

Material : 100% HT Cordura® Fabric + Velcro Strip
Length : Standard Length is 365 cm

* Other Colours on Request

Size	Rope Dia (mm)	Thickness Cordura® Guard (mm)	Standard Length (cm)	Rope Dia (inch)	Thickness Cordura® Guard (inch)	Standard Length (Feet)
A	24-36	1,5	365	1"-1-1/2"	1/16"	12,00
B	40-52	1,5	365	1-5/8"-2-1/8"	1/16"	12,00
C	56-64	1,5	365	2-1/4"-2-5/8"	1/16"	12,00
D	68-80	1,5	365	2-3/4"-3-1/4"	1/16"	12,00

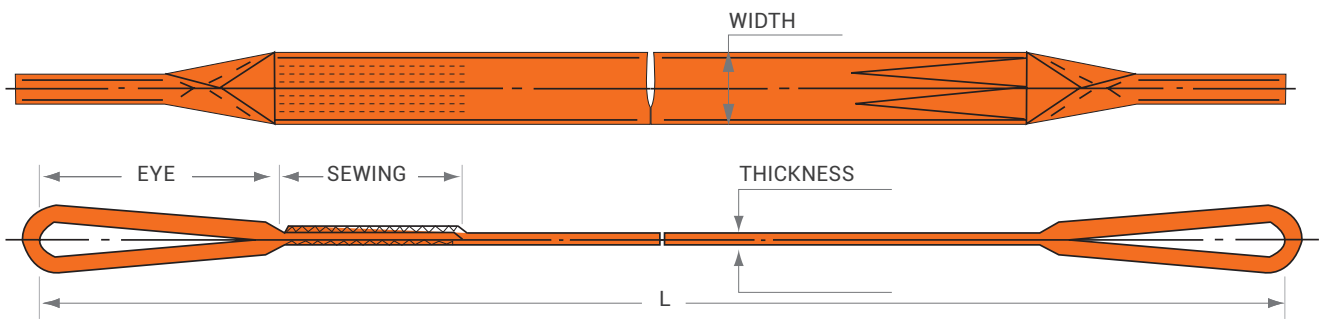


POLYESTER GUARD ▶ CHAFE GEARS



CORDURA® GUARD ▶ CHAFE GEARS

LE-1 BAND WEBBING SLING



SPECIFICATIONS

Material : 100% HT Polyester Webbing
Standard : EN 1492-1+A1
Safety Factor : 7:1

BENEFITS / FEATURES

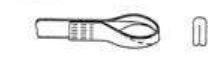
High quality product with the 7:1 safety factor
Produced from the high strength polyester webbing
Various sizes available for every application
Not slippery
High resistance to chemical and oil contamination
Custom made slings for specific applications may be made to customer specifications
Various colour are available



	With (mm)	Working Load (kgf 100%)	Working Load (kgf 80%)	Working Load (kgf 200%)	Angle (0-45°) Working Load (kgf)	Angle (45-60°) Working Load (kgf)	Breaking Load (kgf)	Working Load (kgf)	Length (m)
VIOLET	30-50	1000	800	2000	1400	1000	7000	1000	1-10
GREEN	70	2000	1600	4000	2800	2000	14000	2000	2-10
YELLOW	90	3000	2400	6000	4200	3000	21000	3000	2-10
GRAY	120	4000	3200	8000	5600	4000	28000	4000	4-10
RED	150	5000	4000	10000	7000	5000	35000	5000	4-10
BROWN	180	6000	4800	12000	8400	6000	42000	6000	4-10
BLUE	250	8000	6400	16000	11200	8000	56000	8000	5-10
ORANGE	300	10000	8000	20000	14000	10000	70000	10000	5-10

- 

1. Flat eye
- 

2. Reversed eye
- 

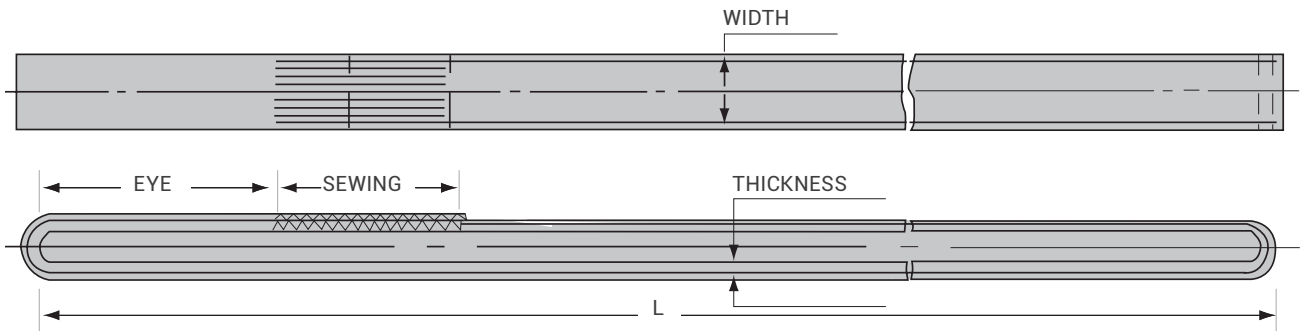
3. Folded eye 1/2 width from 1 side
- 

4. Folded eye 1/2 width from 2 sides
- 

5. Folded eye 1/3 width

	0° 100%		60° 85%
	30° 95%		90° 70%
	45° 90%		120° 50%

LE-2 ROUND WEBBING SLING

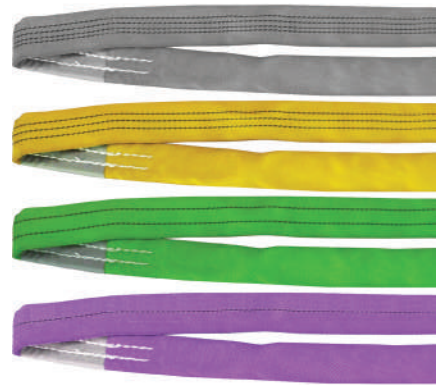


SPECIFICATIONS

Material : 100% HT Polyester Webbing
Standard : EN 1492-2+A1
Safety Factor : 7:1

BENEFITS / FEATURES

High quality product with the 7:1 safety factor
Produced from the high strength polyester webbing
Various sizes available for every application
Not slippery
High resistance to chemical and oil contamination
Custom made slings for specific applications may be made to customer specifications
Various colour are available



	With (mm)	Working Load (kgf 100%)	Working Load (kgf 80%)	Working Load (kgf 200%)	Angle (0-45°) Working Load (kgf)	Angle (45-60°) Working Load (kgf)	Breaking Load (kgf)	Working Load (kgf)	Length (m)
VIOLET	25	1000	800	2000	1400	1000	7000	1000	1-10
GREEN	50	2000	1600	4000	2800	2000	14000	2000	2-10
YELLOW	75	3000	2400	6000	4200	3000	21000	3000	2-10
GRAY	100	4000	3200	8000	5600	4000	28000	4000	4-10
RED	125	5000	4000	10000	7000	5000	35000	5000	4-10
BROWN	150	6000	4800	12000	8400	6000	42000	6000	4-10
BLUE	200	8000	6400	16000	11200	8000	56000	8000	5-10
ORANGE	250	10000	8000	20000	14000	10000	70000	10000	5-10

	0° 100%		60° 85%
	30° 95%		90° 70%
	45° 90%		120° 50%



TECHNICAL APPENDIX

OUR MATERIALS



DYNEEMA® FIBER

Dyneema® is an UHMWPE fiber. DSM invented Dyneema® more than 30 years ago and it has been in production since 1990. The fiber is incredibly versatile with virtually limitless applications. The fiber is manufactured by means of a gel-spinning process that combines extreme strength with incredible softness. Dyneema® is a super-strong fiber based on UHMWPE. It offers maximum strength combined with minimum weight.

Dyneema® SK75 is an extremely high-strength, low-stretch fiber.

Dyneema® SK78 fiber from DSM Dyneema® proved its superior performance under extreme conditions. The high modulus fiber, SK78 has a better stability under constant loads, improved creep feature than its prototype.

Dyneema® SK90 is one of the most advanced high-tech fibers with 12-13% greater strength, has same creep feature as SK-75 fiber. It is a perfect fiber for extreme sailors who are in search of outstanding performance.

Dyneema® SK99 is the newest fiber in Dyneema's SK range - 99 sailing inspirations with Dyneema® spotlights and shares the many ways the world's strongest fiber is extending performance and giving professional and recreational sailors a winning, and safety, edge. SK99 has nearly 20% higher strength than SK78 and keeps the same elongation and creep features as SK75.

Technora®

TECHNORA® FIBER

Technora® is a para-aramid fiber made from co-polymers and produced from poly-paraphenylene terephthalamide (ppta). It was independently developed by Teijin and has been commercially available since 1987. This high performance fiber has a range of excellent properties, including high tensile strength, good fatigue resistance, long-term dimensional stability and good resistance to corrosion, heat, chemicals and saltwater.

Vectran™

VECTRAN® FIBER

Vectran® is a high-performance multifilament yarn spun from liquid crystal polymer (LCP) produced by Kuraray in Japan. Vectran® is currently the only melt spun lcp fiber in the world that is commercially available. The unique combination of characteristics of Vectran® fibers make it superior to many other materials and enable it to perform under conditions in which other materials fail.

Twaron®

TWARON® FIBER

Twaron® is a para-aramid, high- performance yarn. Offering well-balanced performance in terms of mechanical properties, chemical resistance and thermal stability, Twaron® is recognized across a wide range of industries as an extremely valuable material with excellent durability. Their experience in aramid production, which extends back more than 30 years, not only guarantees a technically well-established product, it is also the basis for developments, often in close cooperation with our customers, to tailor Twaron® to the specific requirements of various applications.

POLYESTER

POLYESTER

First commercial polyester fiber production: 1953, Dupont company. Polyester is a category of polymers which contain the ester functional group in their main chain. Polyester is the most durable of the common materials. It has good breaking load and a low elongation. It has good resistance against sunlight, external abrasion. Polyester does not lose strength rapidly due to cyclic loading. Polyester has a low co-efficient of friction. Polyester is used as a material for the cover (protection against UV radiation) in the hig-tech ropes and is most widely used fiber in yachting ropes as well as for anchoring lines.

POLYAMIDE

POLYAMIDE

First commercial nylon fiber production: 1939, Dupont company. A manufactured fiber in which the fiber forming substance is a long-chain synthetic polyamide in which less than 85% of the amide-linkages are attached directly (-co nh-) to two aliphatic groups. Polyamides-of its strength when wet. The abrasion resistance of polyamide is better in wet conditions than in dry conditions. Polyamide can become stiff (kept in wet condition for too long). The most important polyamides are PA 6 and PA 6.6. Polyamide is used for mooring lines, sport climbing ropes, safety and rescue ropes.

OUR TREATMENTS



This special polyurethane coating known as long lasting- most efficient kind of protective coating that is being applied to each of our high-tech lines to improve abrasion resistance on the ropes and avoids slippage between cover and core. This particular process offers excellent substrate protection to get better results, which also makes the splicing much easier.



This particular thermal process increases efficiency and strength of Dyneema® ropes, which also achieves significant improvements in the break load of the rope and almost eliminates the 'creep' that helps ropes to have better performance. This procedure contracts the yarns and increases the net fiber density of the rope as well. The ropes become stronger and more durable than standard production performance ropes through these processes.



Dyneema® fiber currently has a lowest stretch among all the other synthetic fibers. However, the constructional elongation will occur during twisting and braiding processes of basic rope manufacturing procedure. Pre-Stretch method is used to minimize this constructional elongation and improve rope strength. When the heat set and Pre-Stretch process applied on the rope together, the both constructional and structural elongation will be reduced yet further increase in strength is also obtained by making the polymer to linear array. We apply this method to all of our high-tech and mid-tech lines to have an excellent product that exceeds our customer's needs.

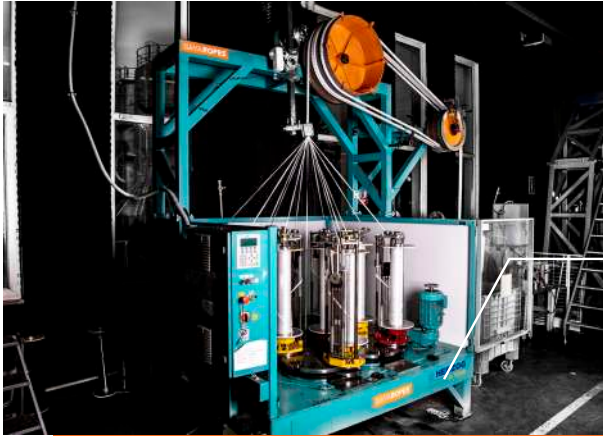


SAFETY INSTRUCTION



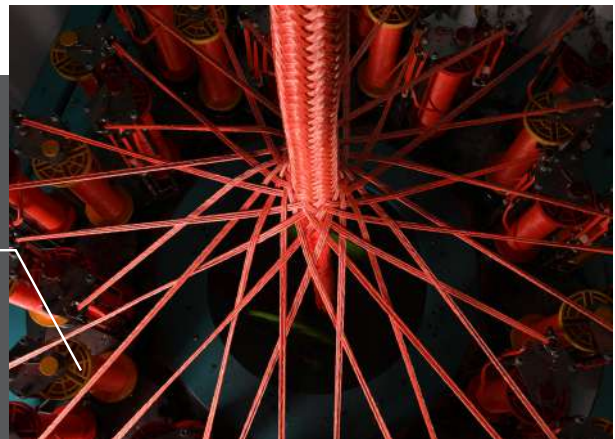
Some essential “Do’s” and Don’t’s”.

- Ensure before use that the ropes are in good condition.
- Store ropes in a well-ventilated dry atmosphere away from heat, strong sunlight and corrosive substances.
- Always coil ropes in the direction of Lay ; Left hand (L.H.) lay anti-clockwise, Right hand (R.H.) lay clockwise.
- Never load a kinked rope or pull it through a block, as the rope is weaker at the kink and likely to part at that point at a much lower breaking strain.
- For the purpose of forming an eye this will reduce its strength by 50%. Splice the rope in the normal manner, reduction in the strength of the rope due to splicing is about 10%.
- Chafe and wear account for most rope failure. Never use a smaller sheave than is recommended for the size of rope you are using.
- Do not drag over sharp, rough or dirty surfaces, as abrasives can penetrate the rope and damage the fibres.
- Avoid contamination by chemicals or fumes. If contamination is suspected, wash man-made fibre ropes in cold running water e.g. by hosing.
- If a rope has been used in mud, sand or grit, it should be cleaned thoroughly before being stored. To wash rope, hang it up in loose coils or flake it out on the deck and again hose with fresh water.
- Avoid build-up of excessive turn in ropes. If this condition has occurred, loops will form.
- Never stand in rope loops.
- Regular inspection of ropes is a worthwhile exercise, as the life can be extended considerably by proper repair and protection at obvious chafing points.



INNOVATIVE & SMART SOLUTIONS

HIGH-TECH PRODUCTION FACILITY



IN-HOUSE SPLICING

CUSTOM-MADE PRODUCTION



OVERVIEW PROPERTIES

FIBERS	POLYAMIDE 6&6.6 (PA)	POLYESTER (PES)	POLYPROPYLENE MULTIFILAMENT (PP)	POLYPROPYLENE (HIGH TENACITY) (HTPP)
BRAND NAME	NYLON® PERLON® ENKALON®	DIOLEN® TREVERIA® DACRON®	HOSTALEN® SOFTLENE® LEOLENE®	LEOLENE® AROVA® BETELON®
TENACITY OF YARN (CN/DTEX)	7-9	7-9	APP.6	APP.8
SPESIFIC GRAVITIY (KG/DM³)	1,14	1,38	0,91	0,91
REDUCTION IN TENACITY WHEN WET (%)	10-15	0	0	0
WATER ABSORPTION (%)	1-7	0,5-2	0	0
KNOT STABILITY (%)	60-65	55-60	55-65	55-65
UV RESISTANCE	VERY GOOD	EXCELLENT	GOOD ONLY WHEN TREAT	GOOD ONLY WHEN TREAT
BREAKING STRETCH (%)	14-28	10-18	14-17	15-16
CREEP	SLIGHT CREEP UNDER LOAD	HARDLY MEASURABLE	CREEPS AT HIGH LOADS	CREEPS AT HIGH LOADS
RESISTANCE TO ABRASION	EXCELLENT	EXCELLENT	SUFFICIENT	SUFFICIENT
WASHING TEMPERATURE (°C)	50-60	50-60	30	30
RESISTANCE TO ACIDS (%)	GOOD	GOOD	VERY GOOD	VERY GOOD
RESISTANCE TO PETROLEUM BASED PRODUCTS	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT
RESISTANCE TO SOLVENTS	FORMIC ACID & ACETIC ACIT AT HIGH TEMPERATURE	PHENOLS, CRESOLS ZINC CHLORIDE	MINIMAL REACTION	MINIMAL REACTION
RESISTANCE TO ALKALI	GOOD RESISTANT AGANIST WEAK SOLUTIONS	GOOD AT ROOM TEMPERATURE	GOOD RESISTANT AGANIST WEAK SOLUTIONS	GOOD RESISTANT AGANIST WEAK SOLUTIONS
INSULATING PROPERTIES	VERY GOOD	VERY GOOD	EXCELLENT	EXCELLENT
HIGHEST TEMPERATURE (°C)	130	170	80	80
MELTING POINT (°C)	218	256	165	165

CHEMICAL RESISTANCE

CHEMICALS	TEST CONDITIONS			RESIDUAL STRENGTH				
	CONCENTRATION	TEMPERATURE	EXPOSURE	TYPE OF FIBRE				
	CHEMICAL TO WATER %	DEG °C	HOURS	POLYAMIDE	POLYESTER	POLYPROPYLENE	ARAMID	HMPE
ACIDS								
HYDROCHLORIC	34%	20°C	100	0%	70%	100%	95%	100%
NITRIC	66%	20°C	100	0%	100%	100%	95%	95%
SULPHURIC	96%	20°C	100	0%	100%	100%	40%	90%
FORMIC	90%	20°C	100	0%	95%	100%	90%	100%
ACETIC	100%	20°C	10	85%	95%	100%	100%	100%
ALKALIS								
CAUSTIC SODA	40%	20°C	100	50%	0%	90%	90%	100%
CAUSTIC SODA	20%	70°C	150	100%	0%	100%	85%	90%
CAUSTIC POTASH	40%	20°C	100	90%	0%	90%	90%	100%
SOLVENTS								
TRICHLOROETHYLENE	100%	30°C	150	100%	95%	80%	100%	100%
CARBON TETRACHLORIDE	100%	20°C	150	100%	100%	100%	98%	100%
BENZENE	100%	70°C	150	100%	100%	100%	98%	95%
METACRESOL	100%	100°C	40	0%	0%	100%	80%	100%
OXIDISING AGENTS								
HYDROGEN PEROXIDE	10%	20°C	100	0%	100%	90%	95%	100%

THIS TABLE SHOWS THE RESIDUAL STRENGTHS OF SYNTHETIC FIBRES AFTER CHEMICAL EXPOSURE UNDER SPECIFIC CONDITIONS.

OVERVIEW PROPERTIES

POLYETHYLENE (PE)	HIGH MODULUS POLYETHYLENE (UHMWPE)	ARAMID	LIQUID CRYSTAL POLYMER (LCP)	POLYBENZOXAZOLE (PBO)	FIBERS
	DYNEEMA® SPECTRA®	TWARON® TECHNORA® KEVLAR® HERACRON®	VECTRAN®	ZYLON®	BRAND NAME
APP. 4,5	35	20-25	20	37	TENACITY OF YARN (CN/DTEX)
0,95	0,97	1,39-1,44	1,40	1,52	SPECIFIC GRAVITY (KG/DM³)
0	0	0	0	0	REDUCTION IN TENACITY WHEN WET (%)
0	0	1,9-7	1	0,6	WATER ABSORPTION (%)
50-60	35-50	35-50	35-50	35-55	KNOT STABILITY (%)
GOOD	EXCELLENT	POOR	POOR	POOR	UV RESISTANCE
10-19	3,8	3,4	3,3	2,8	BREAKING STRETCH (%)
CREEPS AT HIGH LOADS	CREEPS AT HIGH LOAD	HARDLY MEASURABLE	IMMEASURABLE	IMMEASURABLE	CREEP
SUFFICIENT	VERY GOOD	UNSATISFACTORY	GOOD	UNSATISFACTORY	RESISTANCE TO ABRASION
30	30	80-90	60	50	WASHING TEMPERATURE (°C)
EXCELLENT	EXCELLENT	PARTIALLY GOOD RESISTANCE	EXCELLENT	GOOD	RESISTANCE TO ACIDS (%)
EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	RESISTANCE TO PETROLEUM BASED PRODUCTS
MINIMAL REACTION	MINIMAL REACTION	MINIMAL REACTION	MINIMAL REACTION	MINIMAL REACTION	RESISTANCE TO SOLVENTS
EXCELLENT	EXCELLENT	PARTIALLY GOOD	VERY GOOD	VERY GOOD	RESISTANCE TO ALKALI
EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT	INSULATING PROPERTIES
70	70	350	200	500	HIGHEST TEMPERATURE (°C)
140	147	500 DECOMPOSES	300	650 DECOMPOSES	MELTING POINT (°C)

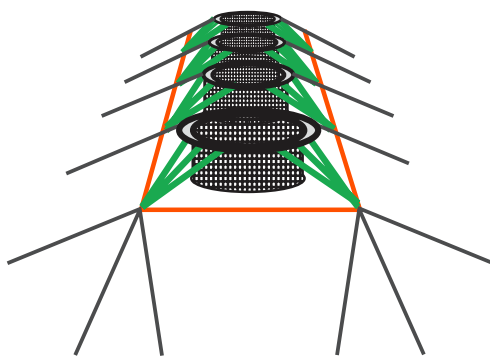
TYPICAL CHARACTERISTIC OF MATERIALS

MATERIALS	SPECIFIC GRAVITY	SPECIFIC MODULUS N/TEX	SPECIFIC STRENGTH N/TEX	DYNAMIC COEFFICIENT OF FRICTION AGAINST METAL	MELTING POINT °C	OTHER CHARACTERISTIC
POLYESTER	1,38	10	0,84	0,12 - 0,15	256	EXCELLENT WET INTERNAL ABRASION RESISTANCE
POLYAMIDE	1,14	4	0,84	0,10 - 0,12	218	10-15% WET STRENGTH LOSS. FAIR WET INTERNAL ABRASION RESISTANCE
POLYPROPYLENE	0,91	8	0,73	0,15 - 0,22	165	LOW STRENGTH. FLOAT ON WATER
POLYPROPYLENE/ POLYETHYLENE (MIXED POLYOLEFIN)	0,92-0,94	9	0,84	0,10 - 0,15	140	BETTER ABRASION RESISTANCE THAN POLYPROPYLENE. FLOAT ON WATER
POLYESTER/POLYOLEFIN DUAL FIBRES	0,99-1,14	10	0,80	0,10 - 0,15	256 - 140	VERY GOOD WET/DRY ABRASION RESISTANCE.
POLYAMIDE MONO AND FIBRE MIXTURE	0,98-1,14	4	0,84	0,10 - 0,12	165 - 218	GOOD ABRASION RESISTANCE FOR USE ON WINCHES
POLYESTER/POLYPROPYLENE MELT MIXTURE	0,99	8	0,80	0,12 - 0,15	173	STRONGER THAN POLYPROPYLENE. FLOAT ON WATER
ARAMID	1,44	49	2,03	0,15	500	POTENTIAL AXIAL COMPRESSION FATIGUE PROBLEMS, BUT THESE CAN BE OVERCOME. LONG TENSION-TENSION FATIGUE LIFE
LCP (LIQUID CRYSTAL POLYMER)	1,40	60	2,40	0,13	300	HIGH STRENGTH AND LOW STRETCH. LONG TERM DURABILITY TO FATIGUE
UHMWPE (HIGH MODULUS POLYETHYLENE)	0,97	110	3,50	0,07	147	LOW MELTING POINT. FLOAT ON WATER. LONG TENSION-TENSION FATIGUE LIFE
STEEL WIRE	7,85	26	0,18	0,23	1600	CORRODES. HEAVY. MODERATE TENSION-TENSION FATIGUE LIFE.

SUGGESTED MOORING ROPES FOR VARIOUS CLASSES OF VESSELS

PASSANGER VESSELS , RO-RO, CAR-CONTAINER CARRIERS		DYNE® K / EXTREME - FORCE K/ EXTREME	TANKER SQUARE	LUPP® SQUARE FILM	PP NORMAL	LUPA® SQUARE
Ø						
DWT	3.-5.000 DWT	22	44	48	56	44
	5.-12.000 DWT	24	48	52	60	48
	12.-25.000 DWT	26	52	56	64	52
	25.-40.000 DWT	28	56	60	72	56
	40.-80.000 DWT	32	60	64	76	60
	ABOVE 80.000 DWT	36	64	68	80	64
BULKCARRIERS, TANKERS		DYNE® K / EXTREME - FORCE K/ EXTREME	TANKER SQUARE	LUPP® SQUARE FILM	PP NORMAL	LUPA® SQUARE
Ø						
DWT	5.-10.000 DWT	24	44	48	56	44
	10.-20.000 DWT	26	48	52	60	48
	20.-40.000 DWT	32	52	56	64	52
	40.-80.000 DWT	36	56	60	72	56
	80.-150.000 DWT	38	60	64	76	60
	150.-250.000 DWT	40	64	68	80	64
	ABOVE 250.000 DWT	44	68	72	88	68

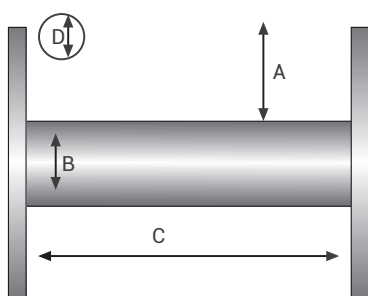
SUGGESTED MOORING & ANCHOR LINE FISH FARMING



- Ø20 MM – Ø36 MM
LUPA® TWIST
(SINKING) POLYAMIDE FIBER
- Ø36 MM – Ø40 MM
LUPA® TWIST
(SINKING) POLYAMIDE FIBER
- Ø40 MM – Ø56 MM
LUPP® SQUARE FILM
(FLOATING) POLYOLEFIN FIBER

NOTE: ROPE DIAMETERS MENTIONED ABOVE CHANGE ACCORDING TO SIZE OF FISHFARMS.
THEREFORE, MINIMUM AND MAXIMUM VALUES ARE USED.

ROPE LENGTH ACCORDING TO DIAMETER & REEL SIZE



ROPES LENGTH (METER) :
$$\frac{(A+B) \cdot A^2 \cdot C \cdot \pi \cdot 10^6}{D^2}$$

A,B,C: (METER) : D: (MM)

CONVERSION TABLE

	TO CONVERT	MULTIPLY BY	TO CONVERT	MULTIPLY BY
WEIGHT	POUNDS TO GRAMS	453592	GRAMS TO POUNDS	0,002205
	POUNDS TO KILOGRAMS	0,4536	KILOGRAMS TO POUNDS	2,20462
	TONS TO KILOGRAMS	1016,05	KILOGRAMS TO TONS	0,0009842
	POUNDS TO OUNCES	16	OUNCES TO POUNDS	0,0625
	POUNDS/100 FEET TO GRAMS/METERS	14,8816394	GRAMS/METERS TO POUNDS / 100 FEET	67,0969
STRENGTH	KILOGRAMS TO KILONEWTONS	0,0098	KILONEWTONS TO KILOGRAMS	101,972
	TONS TO NEWTONS	9810	NEWTONS TO TONS	0,000102
LENGTH	INCHES TO MILLIMETERS	25,40	MILLIMETERS TO INCHES	0,03937
	FEET TO METERS	0,3048	METERS TO FEET	3,208
	FEET TO INCHES	12	INCHES TO FEET	0,833
	YARDS TO METERS	0,9144	METERS TO YARDS	1,0936
	YARDS TO FEET	3	FEET TO YARDS	0,333
	MILES TO KILOMETERS	1,6093	KILOMETERS TO MILES	0,6214
	CIRC. INCHES TO DIAMETER MILLIMETERS	8	DIAMETERS MILLIMETERS TO CIRC. INCHES	0,125
AREA	SQUARE FEET TO SQUARE METERS	0,0929	SQUARE METERS TO SQUARE FEET	10,7639
	SQUARE YARDS TO SQUARE METERS	0,8361	SQUARE METERS TO SQUARE YARDS	1,1960
TEX-SYSTEM	DENIER	WT.ING/9000M	TEX TO DTEX	10
	TEX	WT.ING/1000M	DEN TO TEX	0,111
	DTEX	WT.ING/10.000M	CN/DTEX	GR/DEN



STANDARDS OF ROPES

EN ISO 9554	Fibre Ropes - General Specifications
EN ISO 1968	Fibre Ropes and Cordage - Vocabulary
EN ISO 2307	Fibre Ropes - Determination of Certain Physical and Mechanical Properties
EN ISO 1140	Fibre Ropes - Polyamide - 3, - 4 and - 8 Strand Ropes
EN ISO 1141	Fibre Ropes - Polyester - 3, - 4 and - 8 Strand Ropes
EN ISO 1346	Fiber Ropes - Polypropylene - 3, - 4 and - 8 Strand Ropes
EN ISO 1181	Fibre Ropes - Manila and Sisal - 3,- 4 and - 8 Strand Ropes
EN ISO 10547	Polyester Fibre Ropes - Double Braid Construction
EN ISO 10554	Polyamide Fibre Ropes - Double Braid Construction
EN ISO 10572	Mixed Polyolef in Fibre Ropes
EN ISO 10325	Fibres Ropes - High Modulus Polyethylene - 8 Strand Braided Ropes, 12 Strand Braided Ropes and Covered Ropes
ISO 10556	Fibres Ropes of Polyester/Polyolef in Dual Fibres
EN 1891	Personel Protective Equipment for The Prevention of Falls From A Height - Low Stretch Kernmantel Ropes
EN 892	Mountaineering Equipment - Dynamic Mountaineering Ropes - Safety Requirements and Test Methods
EN 564	Mountaineering Equipment - Accessory Cord - Safety Requirements and Test Methods

STANDARDS OF ROPES

MIL-DTL 24050E	Polyamide Fibre Ropes - Double Braid Construction
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STANDARDS OF SLINGS

EN 1492-1+A1	Textile Slings - Safety - Part 1: Flat Woven Webbing Slings, Made of Man - Made Fibers for General Purpose Use
EN 1492-2+A1	Textile Slings - Safety - Part 2: Roundslings, Made of Man - Made Fibers for General Purpose Use

QUALITY - TEST

Kaya Ropes manufactures all kinds of ropes with technical specifications that are suitable for all kind of conditions & ropes made for a specific field with international quality certifications also offering a wide range of construction type and raw materials for every field where the safety of human life and property is of prime concern.

For certain type of products, Kaya Ropes has the type approval and inspection certificates from Turk Loydu. Additionally, Kaya Ropes offers inspection certificates from DNV-GL and Bureau Veritas upon special request from their clients.







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