

MOORING ROPES



ST ROPE

Welcome to the Synthetic fibre world





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ABOUT US

SOLUZIONI TESSILI ROPE is operating in the synthetic fibres world for more than 20 years now.

We started our activity focusing on GP race sails yachts, where the quality of the materials and the level of the finishes of the running rigging equipment must be at top level, this in order to guarantee maximum durability and the best performance of ropes even under heavy stress conditions.

With this concept clearly in mind we moved years ago in the maritime sector, with the aim of bringing our experience and our passion for quality also to mooring and towing world.

We have now established strong partnerships with some of the main ropes manufacturers from both Europe and Asia and we can provide tailored solutions for every kind of application.



YOUR TRUSTED PARTNER FOR MOORING AND TOWING ROPES

OUR SERVICES



STORAGE FACILITIES



WORLDWIDE SHIPPING



DESIGNATED PROJECT MANAGER



FAST DELIVERY



WIDE RANGE OF CERTIFIED PRODUCTS



CERTIFIED BY THE WORLD'S MAIN REGISTERS

PRODUCTS







ZenaDyn is an ultra-high strength solution made from TROSAR® yarns, an HMPE fibre produced by DSM.

ZenaDyn ropes are produced in a 12 strands construction and are stronger than steel ropes in the same diameter. It is specifically developed for the maritime industry in order to meet the need for light but strong ropes in a cost driven environment.

Our **ZenaDyn** is particularly indicated for the use as Main Line and Pennant in the Towing field. Its low elongation gives a confident feeling to the operator, with an immediate answer to the maneuver. Thanks to its floating structure and its high breaking load **ZenaDyn** allows to reduce the diameter and the total weight of the line, this means you need less operators for the handling operations.

On request the cable can be supplied with HMPE or PES cover for a further protection against chafing and accidental damages.

DIAM MM	CIRC INCLES	WEIGHT		MBL		LDBF	
		KTEX	KG 100M	KN	TONS	KN	TONS
20	2 1/2	227	22,70	384	39,2	346	35,3
24	3	324	32,40	533	54,4	480	49,0
28	3 1/2	444	44,40	704	71,9	634	65,0
32	4	589	58,90	918	93,7	826	84,0
36	4 1/2	720	72,00	1.104	112,7	994	101,4
40	5	880	88,00	1.340	136,6	1.206	123,0
42	5 1/4	979	97,90	1.472	150,1	1.325	135,1
44	5 1/2	1.078	107,80	1.604	163,5	1.443	147,2
46	5 3/4	1.171	117,10	1.713	174,7	1.542	157,2
48	6	1.264	126,40	1.823	185,9	1.641	167,3
50	6 1/4	1.388	138,80	1.988	202,7	1.789	182,4
52	6 1/2	1.512	151,20	2.153	219,5	1.937	197,6
54	6 3/4	1.636	163,60	2.318	236,3	2.086	212,7
56	7	1.760	176,00	2.482	253,1	2.234	227,8
58	7 1/4	1.885	188,50	2.647	269,9	2.382	242,9
60	7 1/2	2.010	201,00	2.779	283,4	2.501	255,1
62	7 3/4	2.135	213,50	2.937	299,5	2.643	269,6
64	8	2.260	226,00	3.094	315,5	2.785	284,0
66	8 1/4	2.423	242,30	3.328	339,4	2.995	305,4
68	8 1/2	2.585	258,5	3.498	356,7	3.148	321,0
70	8 3/4	2.748	274,80	3.734	380,8	3.361	342,7
72	9	2.910	291,0	3.900	397,7	3.510	357,9
74	9 1/4	3.065	306,50	4.083	416,3	3.674	374,7
76	9 1/2	3.220	322,00	4.306	439,0	3.875	395,1
78	9 3/4	3.375	337,50	4.447	453,5	4.003	408,2
80	10	3.530	353,00	4.668	476,0	4.201	428,4

			
Specific gravity	Melting point	Elongation at 50% of BL	Water absorption
0,97	144°C	2%	NO

ZENADYN + HMPE JACKET

Our ZenaDyn 12 strands is also available with a complete HMPE protection that is braided all over the full length of the cable.

The particular construction of the jacket ensures a maximum protection against chafing and high abrasion caused by the poor conditions of bollards and panama eyes of the towed vessels. The protective effect is enhanced by the PU coating applied on the jacket, that significantly reduces the operating temperatures.

This combination is particularly indicated when the rope is intended as a pennant and is subjected to very high stress; our HMPE protective jacket is the perfect solution to elongate the lifespan of the cable and reduce the total cost per tow, keeping the floatability of the line.

DIAM MM	CIRC INCHES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
40	5	940	94,00	1.141	116,3	1.026	104,7
44	5 1/2	1.150	115,00	1.381	140,8	1.243	126,7
48	6	1.360	136,00	1.611	164,3	1.450	147,9
52	6 1/2	1.600	160,00	1.921	195,9	1.729	176,3
56	7	1.850	185,00	2.192	223,5	1.973	201,2
60	7 1/2	2.120	212,00	2.521	257,1	2.269	231,4
64	8	2.400	240,00	2.882	293,9	2.594	264,5
68	8 1/2	2.720	272,00	3.263	332,7	2.936	299,4
72	9	3.070	307,00	3.623	370,4	3.269	333,4
76	9 1/2	3.400	340,00	4.023	410,2	3.620	369,2
80	10	3.750	375,00	4.513	460,2	4.062	414,2
84	10 1/2	4.125	412,50	4.934	503,1	4.440	452,8
88	11	4.500	450,00	5.353	545,9	4.818	491,3
92	11 1/2	4.900	490,00	5.819	593,4	5.237	534,1
96	12	5.300	530,00	6.284	640,8	5.656	576,7



Specific gravity

0,97



Melting point

144°C



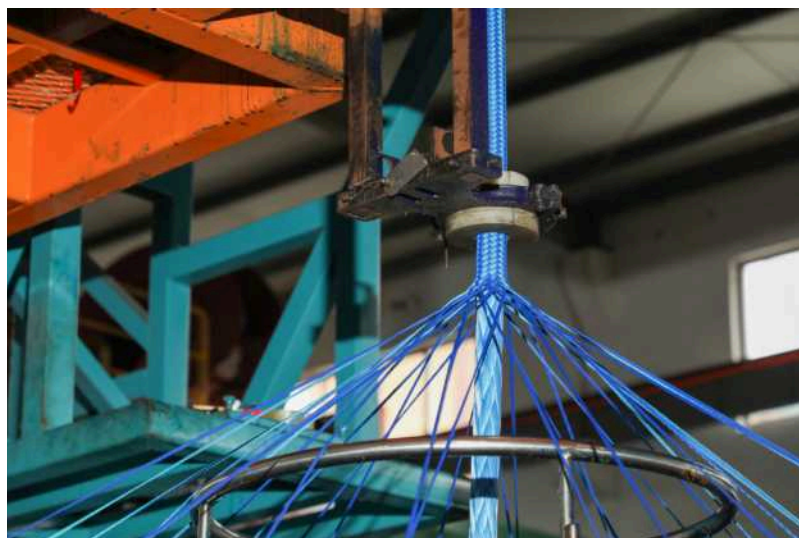
Elongation at
50% of BL

2%



Water absorption

NO



ZENADYN + PES JACKET

Where the floatability of the line is not requested our ZenaDyn 12 strands with PES jacket is the solution.

The jacket can be braided all over the full length of the cable, and the higher melting point of Polyester ensures a great resistance against chafing and abrasion caused by rusted fittings and sharp edges.

Furthermore, thanks to its protective jacket, our Zenayn always keep its rounded shape even when used on winch drums.

We always suggest to protect the line to ensure a longer life cycle of the cables and reduce the yearly cost for towing ropes.

DIAM MM	CIRC INCHES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
40	5	1.058	105,80	1.141	116,3	1.026	104,7
44	5 1/2	1.290	129,00	1.381	140,8	1.243	126,7
48	6	1.562	156,20	1.611	164,3	1.450	147,9
52	6 1/2	1.854	185,40	1.921	195,9	1.729	176,3
56	7	2.181	218,10	2.192	223,5	1.973	201,2
60	7 1/2	2.546	254,60	2.521	257,1	2.269	231,4
64	8	2.834	283,40	2.882	293,9	2.594	264,5
68	8 1/2	3.206	320,60	3.263	332,7	2.936	299,4
72	9	3.621	362,10	3.623	370,4	3.269	333,4
76	9 1/2	4.085	408,50	4.023	410,2	3.620	369,2
80	10	4.541	454,10	4.513	460,2	4.062	414,2
84	10 1/2	5.007	500,70	4.934	503,1	4.440	452,8
88	11	5.495	549,50	5.353	545,9	4.818	491,3
92	11 1/2	6.020	602,00	5.819	593,4	5.237	534,1
96	12	6.557	655,70	6.284	640,8	5.656	576,7



Specific gravity

1.0-1.1



Melting point

144°C/260°C



Elongation at
50% of BL

2%



Water absorption

YES

ZENAPOWER TROSAR

ZenaPower rope is made in a totally new and most advanced construction in which each strand of the rope is made by straight fibres on the inside that are then covered by a high tech braided jacket.

That means excellent abrasion resistance and maximum fibre strength utilization.

This special construction makes ZenaPower the perfect solution as Main Line or Pennant for the tug market.

DIAM MM	CIRC INCHES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
38	4 3/4	835	83,50	1.020	104,0	918	93,6
40	5	925	92,50	1.138	116,0	1.024	104,4
45	5 5/8	1.140	114,00	1.412	144,0	1.271	129,6
50	6 1/4	1.380	138,00	1.706	174,0	1.536	156,6
55	6 7/8	1.625	162,50	2.010	205,0	1.809	184,5
60	7 1/2	1.910	191,00	2.363	241,0	2.127	216,9
65	8 1/8	2.270	227,00	2.785	284,0	2.507	255,6
70	8 3/4	2.625	262,50	3.138	320,0	2.824	288,0
75	9 3/8	3.005	300,50	3.599	367,0	3.239	330,3
80	10	3.580	358,00	4.305	439,0	3.875	395,1



Specific gravity

0,97



Melting point

144°C/152°C



Elongation at
50% of BL

2%



Water absorption

NO

The **TROSAR®** version of our **ZenaPower** is entirely made by the same HMPE fibre produced by DSM.

The parallel fibres and the special cover are then fully covered with PU resin in order to reduce operating temperatures and to enhance the resistance of the cable against abrasion and chafing. This also means a longer life span of the cable and a significant reduction of the annual costs.

This, together with the high Breaking Load and the low elongation (2% at 50% of MBL) make our **ZenaPower** one of the best solutions you can find on the market, representing an excellent alternative to standard covered ropes.

Indeed its 12 strand (covered) structure makes the rope easier to be spliced (also by the crew in case of necessity on board), easy to be inspected in any moment, and it assures that the line is extremely handy even after a long life cycle under rough conditions of use.

ZENAPOWER PES

The innovative structure of **ZenaPower** is composed by 12 strands, each of which has a parallel core made in full PES HT that is then overbraided with a special jacket made in the same material.

With a higher elongation than Trevo, this solution is perfect for the tug world when you need an extra strong cable that can also assure more stretch on the line.

The jacket protecting each strand is then coated with PU resin, giving extra protection against chafing, lowering the external temperature and helping keep the round shape of the cable, even when coiled on the drums.

ZenaPower PES is the perfect alternative to common PES HT cables. It combines the advantages of a parallel core construction (high MBL with limited dimensions) with those of a 12 strands cable (easy to splice, to inspect and to repair), all of this ensuring an unprecedented protection against chafing and abrasion thanks to its high tech jacket.

DIAM MM	CIRC INCHES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
40	5	1.236	123,60	451	46,0	406	41,4
45	5 5/8	1.566	156,60	603	61,5	543	55,4
50	6 1/4	1.930	193,00	745	76,0	671	68,4
55	6 7/8	2.336	233,60	902	92,0	812	82,8
60	7 1/2	2.782	278,20	1.069	109,0	962	98,1
65	8 1/8	3.259	325,90	1.255	128,0	1.130	115,2
70	8 3/4	3.786	378,60	1.451	148,0	1.306	133,2
75	9 3/8	4.346	434,60	1.677	171,0	1.509	153,9
80	10	4.941	494,10	1.912	195,0	1.721	175,5
85	10 1/2	5.534	553,39	2.170	221,3	1.953	199,2
90	11 1/8	6.087	608,73	2.453	250,1	2.207	225,1
95	11 3/4	6.635	663,50	2.746	280,0	2.471	252,0
100	12 1/2	7.165	716,50	3.040	310,0	2.736	279,0



Specific gravity

1,38



Melting point

265°



Elongation at
50% of BL

10%



Water absorption

YES

ZENADYN DOUBLE TWISTED

DIAM MM	CIRC INCHES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
36	4 1/2	720	72,00	840	85,7	756	77,1
40	5	880	88,00	1.028	104,8	925	94,3
42	5 1/4	979	97,90	1.142	116,5	1.028	104,9
44	5 1/2	1.078	107,80	1.258	128,3	1.132	115,5
46	5 3/4	1.171	117,10	1.367	139,4	1.230	125,5
48	6	1.264	126,40	1.476	150,5	1.328	135,5
50	6 1/4	1.388	138,80	1.620	165,2	1.458	148,7
52	6 1/2	1.512	151,20	1.765	180,0	1.589	162,0
54	6 3/4	1.636	163,60	1.910	194,8	1.719	175,3
56	7	1.760	176,00	2.055	209,5	1.849	188,6
58	7 1/4	1.885	188,50	2.201	224,4	1.981	202,0
60	7 1/2	2.010	201,00	2.347	239,3	2.112	215,4
62	7 3/4	2.135	213,50	2.493	254,2	2.244	228,8
64	8	2.260	226,00	2.638	269,0	2.374	242,1
66	8 1/4	2.423	242,30	2.829	288,5	2.546	259,7
68	8 1/2	2.585	258,5	3.018	307,7	2.716	276,9
70	8 3/4	2.748	274,80	3.208	327,1	2.887	294,4
72	9	2.910	291,0	3.397	346,4	3.057	311,8
74	9 1/4	3.065	306,50	3.578	364,9	3.221	328,4
76	9 1/2	3.220	322,00	3.759	383,3	3.383	345,0
78	9 3/4	3.375	337,50	3.940	401,8	3.546	361,6
80	10	3.530	353,00	4.121	420,2	3.709	378,2



Specific gravity

0,97



Melting point

144°C



Elongation at
50% of BL

3%



Water absorption

NO

Our ZenaDyn Double Twisted has been specifically studied for towing applications to offer an unjacketed rope with superior efficiency.

Its twisted construction at a yarn level ensures a better performance of the rope against both external chafing and inner abrasion (yarn to yarn). The higher number of twists allow for a slightly higher elongation (if compared to a standard construction), reduces the stiffness of the cable and increases its longevity. In addition, the PU coating applied on the full length reduces the operating temperatures due to heavy stress conditions.

Last but not least the unjacketed construction make the cable always easy to inspect and to be repaired in case of accidental breakage.

SUPERTOW

SUPERTOW is a special cable that has been developed in cooperation with our partner COTESI, and is specially designed for towing applications.

Made entirely from PES HT, its construction of multi parallel cores maximizes rope breaking strength whilst the compact braided protective cover, comprise of several double twisted yarns, enhances life span by adding to the rope excellent abrasion resistance properties.

Thanks to its perfectly balanced construction, even under stress conditions the core of SUPERTOW always works evenly with the jacket. This avoid the fibres to suffer from rubbing, meaning a longer life of the cable and a higher number of tows.

SUPERTOW is spliced with the new CS3 splice that maximizes rope LDBF (Line Design Breaking Force). Eyes are customized to customer needs and are always protected with coated Pro-tech PES Web and cordura cover. D-Web protection cover, made from HMPE fibres, can be added on the eyes and on the cable, increasing protection against chafing especially in particularly stressed areas.

DIAM MM	CIRC INCHES	WEIGHT		LDBF	
		KTEX	KG/100M	KN	TONS
56	7	2.270	227,00	1.105	112,6
60	7 1/2	2.560	256,00	1.256	128,0
64	8	2.840	284,00	1.409	143,7
68	8 1/2	3.070	307,00	1.577	160,8
72	9	3.670	367,00	1.743	177,7
76	9 1/2	3.900	390,00	1.920	195,8
80	10	4.170	417,00	2.099	214,0
88	11	4.930	493,00	2.498	254,8
92	11 1/2	5.280	528,00	2.721	277,5
96	12	5.600	560,00	2.920	297,8
104	13	6.620	662,00	3.432	349,9
112	14	7.880	788,00	4.054	413,4

Indicated breaking loads do not include any reduction in case of a rope with eye-spliced terminations.



Specific gravity

1,38



Melting point

265°



Elongation at
50% of BL

4%



Water absorption

YES

ZENAMIX FLOATING

ZenaMix is a special composite rope that mixes yarns from high tenacity polyester with high tenacity polyolefin.

This combination, together with the rope construction, assure flexibility and good handling, always guaranteeing that the rope maintains its round shape even under heavy stress conditions.

The floating version of **ZenaMix** is the perfect solution for all mooring applications and, basing on the necessity of the client and the final use of the rope, it can be supplied in **8/12/24 strands** construction.

DIAM MM	CIRC INCHES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
24	3	336	33,64	137,3	14,0	122,6	12,5
28	3 1/2	459	45,91	182,3	18,6	162,8	16,6
32	4	595	59,55	233,9	23,9	208,9	21,3
36	4 1/2	741	74,09	305,3	31,1	272,6	27,8
40	5	914	91,36	369,0	37,6	329,5	33,6
44	5 1/2	1.091	109,09	439,3	44,8	392,3	40,0
48	6	1.318	131,82	507,4	51,7	453,1	46,2
50	6 1/4	1.409	140,91	549,2	56,0	490,3	50,0
52	6 1/2	1.500	150,00	588,7	60,0	525,6	53,6
56	7	1.791	179,09	681,0	69,4	608,0	62,0
60	7 1/2	2.005	200,45	779,8	79,5	696,3	71,0
64	8	2.259	225,91	867,7	88,5	774,7	79,0
70	8 3/4	2.691	269,09	1.032,4	105,3	921,8	94,0
72	9	2.841	284,09	1.087,4	110,9	970,9	99,0
80	10	3.491	349,09	1.318,0	134,4	1.176,8	120,0
85	10 1/2	3.932	393,18	1.493,8	152,3	1.333,7	136,0
90	11 1/8	4.400	440,00	1.669,5	170,2	1.490,6	152,0
96	12	5.000	500,00	1.889,2	192,6	1.686,8	172,0
104	13	5.859	585,91	2.218,7	226,2	1.981,0	202,0
112	14	6.741	674,09	2.559,2	261,0	2.285,0	233,0



Specific gravity

0,99



Melting point

265°C/165°C



Elongation at
50% of BL

9%



Water absorption

YES

ZENAMIX FLOATING SBR

Snap-back is the most common cause of injuries during mooring operations.

In order to reduce this risk in case of failure of a line, our **ZenaMix** ropes can be provided with a special **Snap-Back Reducer** feature. It consists in a smaller braided rope that is integrated in the core of the mooring line.

In case of an accidental breakage the higher elongation of the inner rope ensures that the line does not recoil entirely, in this way the snap-back zone is significantly reduced, with a huge improvement in terms of safety for the crew.

The **Snap-Back Reducer** is safe, reliable and can be easily implemented in all our **ZenaMix** ropes

DIAM MM	CIRC INCLES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
32	4	613	61,33	233,9	23,9	208,9	21,3
36	4 1/2	763	76,31	305,3	31,1	272,6	27,8
40	5	941	94,10	369,0	37,6	329,5	33,6
44	5 1/2	1.124	112,36	439,3	44,8	392,3	40,0
48	6	1.358	135,77	507,4	51,7	453,1	46,2
50	6 1/4	1.451	145,14	549,2	56,0	490,3	50,0
52	6 1/2	1.545	154,50	588,7	60,0	525,6	53,6
56	7	1.845	184,46	681,0	69,4	608,0	62,0
60	7 1/2	2.065	206,47	779,8	79,5	696,3	71,0
64	8	2.327	232,69	867,7	88,5	774,7	79,0
70	8 3/4	2.614	261,38	1.032,4	105,3	921,8	94,0
72	9	2.912	291,19	1.087,4	110,9	970,9	99,0
80	10	3.578	357,82	1.318,0	134,4	1.176,8	120,0
85	10 1/2	4.030	403,01	1.493,8	152,3	1.333,7	136,0
90	11 1/8	4.510	451,00	1.669,5	170,2	1.490,6	152,0
96	12	5.125	512,50	1.889,2	192,6	1.686,8	172,0
104	13	6.006	600,56	2.218,7	226,2	1.981,0	202,0
112	14	6.909	690,94	2.559,2	261,0	2.285,0	233,0



Specific gravity

0,99



Melting point

265°C/165°C



Elongation at
50% of BL

9%



Water absorption

YES

ZENAFLEX

ZenaFlex is a mixed rope that combines yarns from high tenacity Polyester and high tenacity Polyolefin.

In this particular construction PES HT fibres are braided all over the external part of each strand, this in order to enhance the resistance of the rope against chafing and abrasion, especially for those applications where on board fittings are not new, rusted or damaged.

All these features make our ZenaFlex the perfect solution for mooring purposes, ideal to respond to the needs of all types of modern vessels, both passenger or cargo.

DIAM MM	CIRC INCHES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
40	5	871	87,27	336	34,3	303	30,9
44	5 1/2	1.038	103,34	400	40,8	360	36,8
48	6	1.257	125,91	462	47,2	416	42,5
50	6 1/4	1.343	134,09	499	50,9	449	45,9
52	6 1/2	1.429	142,73	536	54,7	483	49,3
56	7	1.705	170,45	620	63,3	558	57
60	7 1/2	1.910	190,90	705	72,0	635	64,8
64	8	2.152	215,45	791	80,7	711	72,6
68	8 1/2	2.419	241,82	886	90,4	797	81,3
70	8 3/4	2.562	256,36	938	95,7	844	86,2
72	9	2.705	270,45	991	101,1	892	91
75	9 3/8	2.933	293,18	1.069	109,1	962	98,2
80	10	3.324	332,27	1.201	122,5	1.081	110,3
85	10 5/8	3.746	374,55	1.357	138,5	1.221	124,6
88	11	4.000	400,00	1.451	148,0	1.306	133,2
90	11 1/4	4.190	419,09	1.518	154,9	1.367	139,4
95	11 7/8	4.667	466,81	1.687	172,2	1.519	155
96	12	4.808	480,90	1.721	175,6	1.549	158,1



Specific gravity

0,99



Melting point

265°C/165°C



Elongation at
50% of BL



Water absorption

YES

ZENAFLEX SBR

Safety should always be a primary aspect to be considered when it comes to choose the right rope for your Vessels, and it is well known that snap-back is the most common cause of injuries during mooring operations.

Our **ZenaFlex** ropes can be provided with a **Snap-Back Reducer** in the core, consisting in a smaller braided rope that is integrated in the mooring line and that,

In case of an accidental breakage, ensures that the main line does not recoil entirely.

In this way the snap-back zone is significantly reduced, with a huge improvement in terms of safety for the crew. The **Snap-Back Reducer** is safe, reliable and can be easily implemented in all our **ZenaFlex** ropes.

DIAM MM	CIRC INCHES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
40	5	901	90	336	34,3	303	30,9
44	5 1/2	1.068	106,82	400	40,8	360	36,8
48	6	1.302	130,00	462	47,2	416	42,5
50	6 1/4	1.388	138,64	499	50,9	449	45,9
52	6 1/2	1.474	147,27	536	54,7	483	49,3
56	7	1.750	175,00	620	63,3	558	57
60	7 1/2	1.975	197,73	705	72,0	635	64,8
64	8	2.217	221,82	791	80,7	711	72,6
68	8 1/2	2.484	248,18	886	90,4	797	81,3
70	8 3/4	2.627	262,73	938	95,7	844	86,2
72	9	2.770	276,82	991	101,1	892	91
75	9 3/8	2.998	300,00	1.069	109,1	962	98,2
80	10	3.415	341,36	1.201	122,5	1.081	110,3
85	10 5/8	3.837	383,64	1.357	138,5	1.221	124,6
88	11	4.091	409,09	1.451	148,0	1.306	133,2
90	11 1/4	4.281	428,18	1.518	154,9	1.367	139,4
95	11 7/8	4.758	475,91	1.687	172,2	1.519	155
96	12	4.899	490,00	1.721	175,6	1.549	158,1



Specific gravity

0,99



Melting point

265°C/165°C



Elongation at
50% of BL

9%



Water absorption

YES

ZENAMIX SINKING

The special construction of **ZenaMix** mixes yarns from high tenacity polyester with high tenacity polyolefin, always assuring flexibility and good handling, and guaranteeing that the rope maintains its round shape even under heavy stress conditions.

The sinking version of our **ZenaMix** features higher percentages of **PES HT**, and this lead to an increased resistance to chafing and abrasion, while the polyolefin fibres always provide very good resistance to UV.

Our **ZenaMix** is the perfect solution for mooring applications but also for towing, where a flexible, durable and cost friendly option is required.

It can be supplied in **8/12 strands** construction.

DIAM MM	CIRC INCLES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
24	3	353	35,32	151	15,4	134,8	13,8
28	3 1/2	482	48,20	200,6	20,5	179,1	18,3
32	4	625	62,52	257,3	26,2	229,8	23,4
36	4 1/2	778	77,80	335,9	34,2	299,9	30,6
40	5	959	95,93	406,0	41,4	362,5	37,0
44	5 1/2	1.145	114,55	483,3	49,3	431,5	44,0
48	6	1.384	138,41	558,2	56,9	498,4	50,8
50	6 1/4	1.480	147,95	604,1	61,6	539,4	55,0
52	6 1/2	1.575	157,50	647,6	66,0	578,2	59,0
56	7	1.880	188,05	749,1	76,4	668,8	68,2
60	7 1/2	2.105	210,48	857,8	87,5	765,9	78,1
64	8	2.372	237,20	954,5	97,3	852,2	86,9
70	8 3/4	2.825	282,55	1.135,7	115,8	1.014,0	103,4
72	9	2.983	298,30	1.196,1	122,0	1.067,9	108,9
80	10	3.665	366,55	1.449,8	147,8	1.294,5	132,0
85	10 1/2	4.128	412,84	1.643,1	167,6	1.467,1	149,6
90	11 1/8	4.620	462,00	1.836,4	187,3	1.639,7	167,2
96	12	5.250	525,00	2.078,1	211,9	1.855,4	189,2
104	13	6.152	615,20	2.440,5	248,9	2.179,0	222,2
112	14	7.078	707,80	2.815,1	287,1	2.513,5	256,3



Specific gravity

1,10



Melting point

265°C/165°C



Elongation at
50% of BL

9%



Water absorption

YES

ZenaDan ropes are made from high quality mixed Polyolefin fibre, with high strength and a very good cost performance. It also features better abrasion resistance if compared to standard Polypropylene, and exceptional gripping capabilities that are enhanced by the outer fuzzy surface developed in use, also protecting the inner fibers against abrasion.

ZenaDan is floating and does not absorb water, keeping identical wet/dry breaking load. Depending on the final application it can be supplied in **3/8/12 strands**.

DIAM MM	CIRC INCLES	WEIGHT		MBL		LDBF	
		KTEX	KG/100M	KN	TONS	KN	TONS
24	3	277	27,73	118,6	12,1	105,9	10,8
28	3 1/2	373	37,27	157,1	16,0	140,2	14,3
32	4	491	49,09	193,3	19,7	172,6	17,6
36	4 1/2	618	61,82	242,7	24,8	216,7	22,1
40	5	764	76,36	302,0	30,8	269,7	27,5
44	5 1/2	923	92,27	360,3	36,7	321,7	32,8
48	6	1.100	110,00	418,5	42,7	373,6	38,1
50	6 1/4	1.195	119,55	456,9	46,6	408,0	41,6
52	6 1/2	1.291	129,09	496,5	50,6	443,3	45,2
56	7	1.495	149,55	554,7	56,6	495,2	50,5
60	7 1/2	1.718	171,82	637,0	65,0	568,8	58,0
64	8	1.955	195,45	713,9	72,8	637,4	65,0
68	8 3/4	2.209	220,91	801,8	81,8	715,9	73,0
72	9	2.473	247,27	900,6	91,8	804,1	82,0
80	10	3.055	305,45	1.098,4	112,0	980,7	100,0
85	10 1/2	3.450	345,00	1.252,1	127,7	1.118,0	114,0
90	11 1/8	3.868	386,82	1.362,0	138,9	1.216,0	124,0
96	12	4.400	440,00	1.570,6	160,2	1.402,4	143,0
104	13	5.164	516,36	1.823,3	185,9	1.627,9	166,0
112	14	5.986	598,64	2.119,8	216,2	1.892,7	193,0



Specific gravity

0,95



Melting point

165°C



Elongation at
50% of BL

9%



Water absorption

NO



ZENATWIST PES

ZenaTwist PES 3 strands features high tenacity characteristics of polyester together with excellent abrasion and high heat resistance. This allow to have a more durable rope with low elongation and excelent fatigue resistance, together with the smoothness of Polyester.



Specific gravity

1,38



Melting point

265°C



Elongation at
50% of BL

9%



Water absorption

NO

DIAM MM	CIRC INCLES	WEIGHT		MBL		LDBF	
		KTEX	KG 100M	KN	TONS	KN	TONS
4	1/2	12	1,18	3,30	0,3	2,9	0,3
6	3/4	27	2,73	6,6	0,7	5,9	0,6
8	1	48	4,82	11,0	1,1	9,8	1,0
10	1 1/4	76	7,59	17,6	1,8	15,7	1,6
12	1 1/2	110	11,00	25,3	2,6	22,6	2,3
14	1 3/4	148	14,82	35,1	3,6	31,4	3,2
16	2	195	19,55	45,0	4,6	40,2	4,1
18	2 1/4	245	24,55	57,1	5,8	51,0	5,2
20	2 1/2	305	30,45	70,3	7,2	62,8	6,4
22	2 3/4	368	36,82	83,5	8,5	74,5	7,6
24	3	436	43,64	98,9	10,1	88,3	9,0
26	3 1/4	514	51,36	117,5	12,0	104,9	10,7
28	3 1/2	595	59,55	134,0	13,7	119,6	12,2
30	3 3/4	682	68,18	150,5	15,3	134,4	13,7
32	4	777	77,73	172,4	17,6	154,0	15,7
36	4 1/2	982	98,18	213,1	21,7	190,2	19,4
40	5	1.214	121,36	263,6	26,9	235,4	24,0
44	5 1/2	1.468	146,82	313,0	31,9	279,5	28,5
48	6	1.750	175,00	369,0	37,6	329,5	33,6
52	6 1/2	2.050	205,00	430,6	43,9	384,4	39,2





SOFT SHACKLES

Soft Shackles are born to replace the normal steel hardware and connections. They are used to connect two different lines and their lightness, together with their strength, allow to have huge advantages in terms of cost saving, weight and maneuverability, reducing the risk of injury for the operator.

Small sizes and low weight will result in a faster and easier connection, without sacrificing the reliability and the durability. With the Soft Shackle the operator can also set a calculated breaking force for the tow line configuration, setting it as the strongest part or as the calculated weak link.

All our **Soft Shackles** are made starting from **TROSAR®**, an HMPE fibre produced by DSM, and are available in 1/2/3/4 loops with increasing breaking loads.

Standard version of the shackles is always protected with **PES cover**, but **HMPE protection** is also available on request.

All the info regarding the **MBL** and the number of laps are sprayed on the surface of the cover to help the crew easily recognize the configuration, this for an easier and faster installation on board and to reduce the risk of mistakes.

Our Soft Shackles are always equipped with a tag including **NFC technology**, in which all the relevant info about the product are stored and can be checked in any moment by the operator.



SOFT SHACKLES

NUMBER OF LAPS	BASE ROPE			SOFT SHACKLES			
	DIAM (MM)	MBL (TONS)	MBL (TONS)	TOTAL WEIGHT (KG)	APPROX. DIAM. OF THE FINISHED SOFT SHACKLE (MM)	MIN. INTERNAL LENGTH WHEN IN USE (MM)	ITEM CODE
1 L	20	39,5	40	1,5	37	600	STSSH01L020
	22	45,9	46	2,0	41	600	STSSH01L022
	24	54,9	55	2,5	44	600	STSSH01L024
	26	62,2	62	3,0	48	600	STSSH01L026
	28	72,8	73	4,0	52	800	STSSH01L028
	30	81,8	82	4,5	56	800	STSSH01L030
	32	94,1	94	5,0	59	800	STSSH01L032
2 L	20	39,5	79	2,0	37	600	STSSH02L020
	22	45,9	92	2,5	41	600	STSSH02L022
	24	54,9	110	3,0	44	600	STSSH02L024
	26	62,2	124	3,5	48	600	STSSH02L026
	28	72,8	146	5	52	800	STSSH02L028
	30	81,8	164	5,5	56	800	STSSH02L030
	32	94,1	188	6	59	800	STSSH02L032
3 L	20	39,5	119	2,5	37	600	STSSH03L020
	22	45,9	138	3,0	41	600	STSSH03L022
	24	54,9	165	4,0	44	600	STSSH03L024
	26	62,2	186	4,5	48	600	STSSH03L026
	28	72,8	218	6,5	52	800	STSSH03L028
	30	81,8	245	7,5	56	800	STSSH03L030
	32	94,1	282	8,5	59	800	STSSH03L032
4 L	20	39,5	158	3,5	37	600	STSSH04L020
	22	45,9	184	4,0	41	600	STSSH04L022
	24	54,9	220	5,0	44	600	STSSH04L024
	26	62,2	249	6,0	48	600	STSSH04L026
	28	72,8	291	8,0	52	800	STSSH04L028
	30	81,8	327	10,0	56	800	STSSH04L030
	32	94,1	376	11,5	59	800	STSSH04L032

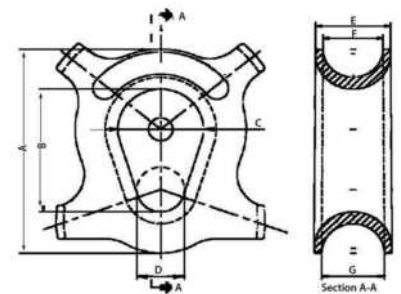
- MBL are theoretical and based on a D/d ratio of 3.5 between the bend diameter and the Base Rope diameter.
- Indicated weights of final product are approximated and subject to variations
- Standard version is supplied with PES jacket. HMPE cover is also available on request.
- Minimum internal length of the finished Soft Shackle (when closed) can be customized on Client's request.

THIMBLES

SQUARE THIMBLES



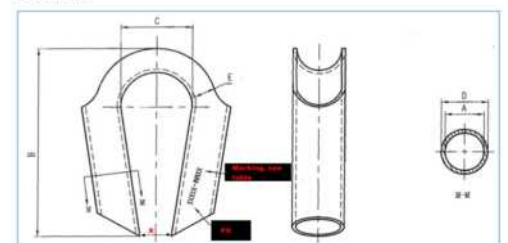
ROPE DIA MM	A MM	B MM	C MM	D MM	E MM	F MM	G MM	KG/EA
32/40	196	127	85	42	57	46	50	2.25
44	205	140	86	42	64	52	54	3.4
48/56	247	149	92	44	85	70	76	5.3
64	274.5	159	102	54	95	76	79	7.9
72	316	194	120	68	102	83	89	12.25
80	349	217.5	127	70	108	89	98	14.45
88/96	403.5	241	156	86	114	114	117	26.4
112	477.5	280	184	104	170	145	145	30



TUBULAR THIMBLES



MARKING	SPEC	A	B	C	D	E	X	KG
48MM	G265	65	312	88	79	31	22	5,81
56MM	G275	75	350	94	90	32	22	8,28
64MM	G285	88	450	130	108	45	25	17,19
72MM	G295	94	500	150	114	50	25	20,51
80MM	G2105	107	550	190	127	55	25	26,00



LASH BOBBINS

SPECS AVAILARLEON REQUEST

PROTECTIONS

MIXED JACKET

This particular protection is represented by a jacket in mixed material (HMPE/PP) in which the twisted construction enhances its protective effect against chafing and abrasion.

It can be provided coated or uncoated and with different pitches basing on the final application.



HMPE BRAIDED JACKET

A special jacket fully made in HMPE with a braided construction to offer the most effective protection against chafing and abrasion. Its strands flatten after the first uses and completely wrap the cable ensuring a longer service life.

Material is always coated with PU resin to improve its resistance and reduce operating temperatures.



VELCRO SLEEVE

A tubular protection that can be made in two different version: 100% HMPE (PU coated) or 100% PES.

Specially designed for mooring applications, in particular when shipboard fittings are rusted or damaged.

Thanks to the velcro closure they can be easily placed in any moment on the cable for an extra protection.



FINISHING AND SPLICING

When the ropes are subjected to heavy stress conditions, in particular when it comes to pennants, we always suggest to place extra protections on the eyes and on the leg to guarantee a longer service life and a better performance.

Cover in the eyes: a protection can be placed only on the eyes to protect them against chafing on bollards and bitts. In the picture an example of our Mixed jacket spliced on the cable, this ensure that the jacket always stays in place.



Full covered: our ropes can be supplied with the jacket on the full length. Protections can be provided in HMPE or PES, basing on the final application and the client's needs.

Cover in the eyes and on the leg: in addition to the jacket on the eyes a further protection can be placed on the initial part of the leg. This ensures that the most stressed areas are always protected.

Our HMPE braided jacket is the perfect solution for this type of applications. In the picture you see the “tongue” finishing that allows to have a smoother surface and remove all the whipping/lashing, reducing the chances that the jacket get stuck during operations.



FINISHING AND SPLICING

Thanks to our experienced guys we can make all the necessary works internally, including designing, splicing, tuning and finishing operations on all types of ropes, materials and constructions.



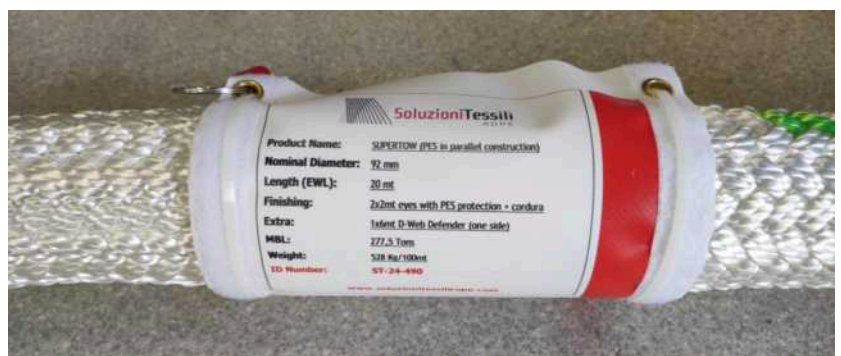
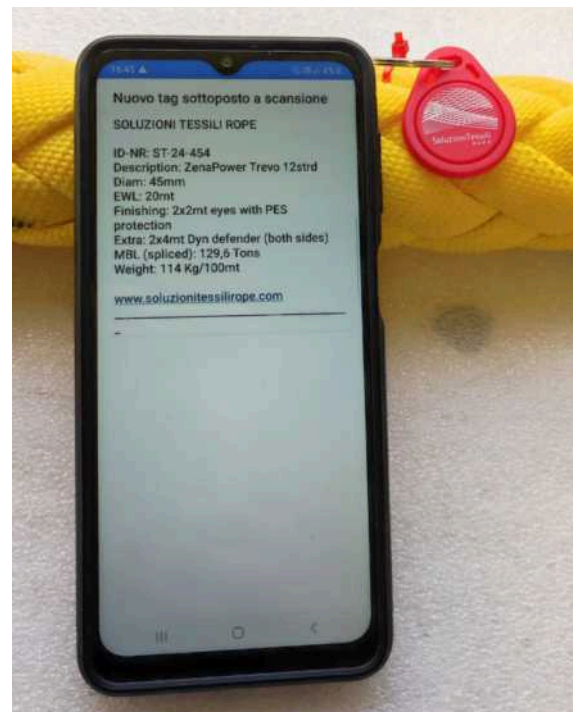


ROPE TRACEABILITY

Identifying and keep track of your ropes is essential for their safe use, especially in those technical markets such as towing.

All our cables come with a plastic label reporting the ID-NR of the coil and all the main info, and with a tag including NFC technology. With a simple scan by means of any IOS or Android phone you can check at any time all the relevant info related to your rope.

On our website the client can access to his private area where he can consult the list of all the cables we supplied, identified by ID-NR. Here you can check all the rope details, download the certificates and edit additional fields such as the date of installation on board, the Tug name, and any other info that can help you with your Line Management Plan.



PARTNERS & CERTIFICATIONS

SOLUZIONI TESSILI ROPE is committed to the highest level of quality.

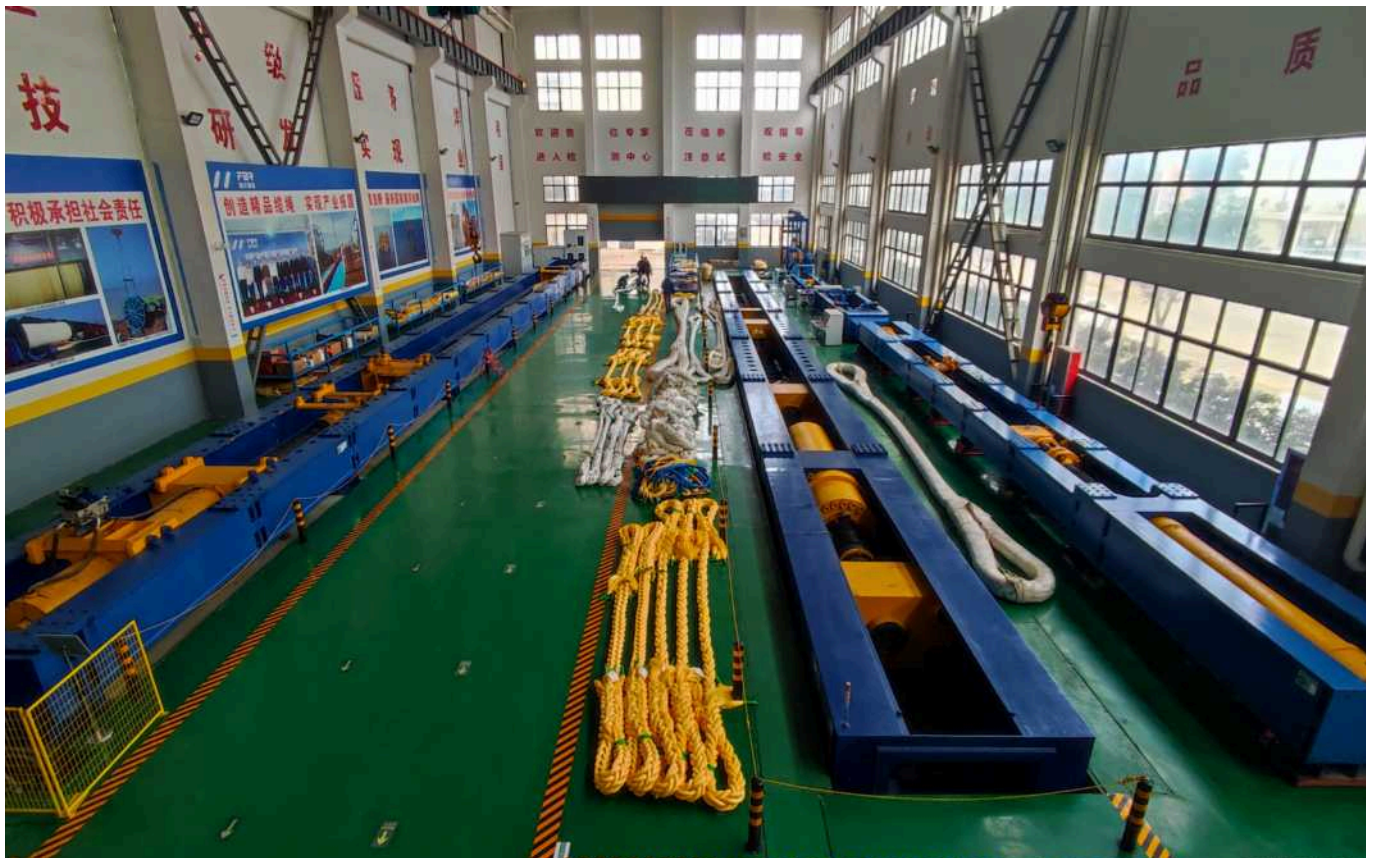
We work with some of the largest ropes manufacturers from both Europe and Asia, and all our partners are certified company that have been approved by the most famous classification societies.

Safety regulation in the maritime market are becoming more and more restrictive and we want to guarantee the customer the best possible offer from a documentary point of view.

In this direction, all our towing ropes (including our Soft Shackles that we produce internally) always come with a IACS certification that can be issued on the specific production batch by one of the main registers (RINA, DNV, LR, BV, etc).



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ST ROPE

