KATRADIS

EST. 1936

GROUP OF COMPANIES

Synthetic mooring ropes

Passion for High Quality

KATRADIS

EST. 1936

KATRADIS GROUP OF COMPANIES

Pioneers of mooring lines

Katradis Group of Companies has a long and distinguished history which goes back to the first half of the twentieth century. The company was established in 1936 by Konstantinos Katradis, operating back then as a ship supplier specializing in high quality mooring ropes.

Currently in the hands of third generation member of the Katradis family, the company has since then become **a pioneer in the field of manufacture of mooring ropes**.

Over the years we have developed extensive expertise in the design and development of **synthetic mooring ropes**, which are our mainline products.

Our rope factory in Greece, whose site covers an area of 30000m2, is one of the **most technologically advanced factories in Europe**, manufacturing top quality ropes for the safe mooring of commercial vessels.

KATRADIS Mooring Ropes exhibit excellent performance and durability compared to commonly used ropes even in the most demanding applications.

Contents

Our success

With numbers

87
Years serving the marine industry and continuing...

10.046
Vessels all around the world trust KATRADIS products

73
Service points all around the world

9.920
Satisfied customers

Over 12.500
Synthetic mooring ropes produced per year

Specifications of fibers

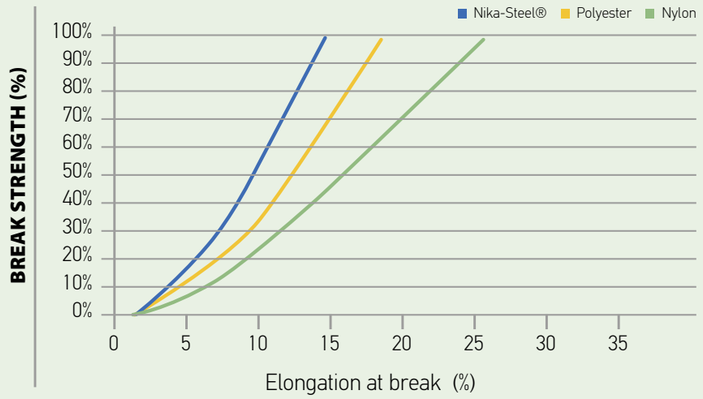
Technical specifications of fibers

BASIC CHARACTERISTICS							
Material	Specific Gravity	Melting point (°C)	Fiber Tenacity (gr/den)	Elongationat break (%)	Abrasion Resistance (0-10)	Water absorption (%)	UV Resistance (0-10)
Polyolefin (NIKA-Steel)	0,91	165	8,2	14	6	0,1	10
Polyester	1,38	265	9,3	16	8	0,1	10
Polyamide	1,14	218	9,3	25	7	3-5	9
Common Polypropylene / Polyolefin	0,91	165	6,5	15	4	0,1	4

The greener colour indicates beneficial property

Break Strength / Elongation graph

The elongation characteristics is a very important factor when selecting a rope material. Ship movements are often calculated before berthing and the excursion is dependent to the rope elongation.



NIKA-Steel® fiber

Produced by KATRADIS MARINE ROPES INDUSTRY

Rope manufacturing starts with the effective twisting of fibers which are processed to the assembly of strands.

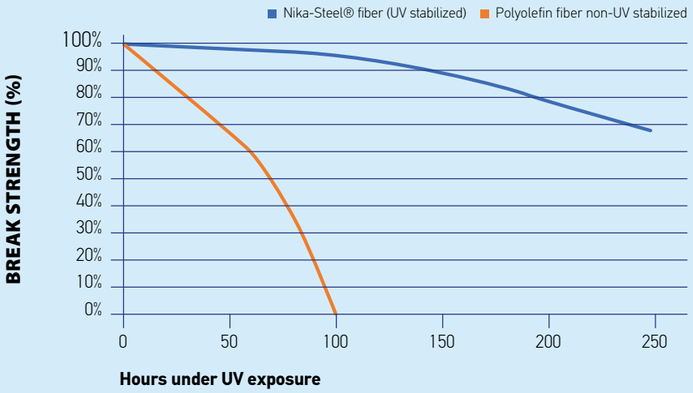
NIKA-Steel® fibers are a special "melt mixture" of first quality virgin polyolefin raw materials (Polypropylene, Polyethylene and UV stabilizers) combined through a unique recipe that has been developed in-house. Produced in our specialized factory facilities, NIKA-Steel® fibers exhibit superior mechanical properties and are used in all manufacture of polyolefin or mixed synthetic ropes.

Why UV stabilization?

It is well-known that sunlight exposure affects all polymer materials and of course synthetic fiber ropes, causing natural degradation of their properties and strength reduction.

NIKA-Steel® fibers exhibit very high resistance to sunlight because they are made using UV stabilizers in their molecular structure, which results in higher strength during their working life.

The effect of UV exposure



Testing performed in special UV chamber according to ASTM G155

Graph showing the fiber strength reduction which normally comes due to UV effect after 250 hours. Fibers that are not UV stabilized show reduced residual strength over time.

Unique Technology of Double Twisted rope yarns

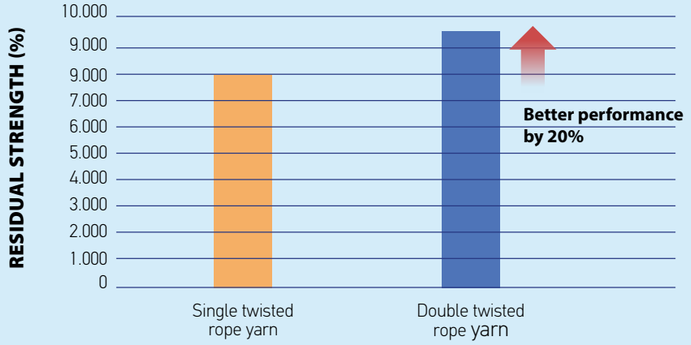
KATRADIS MARINE ROPES INDUSTRY SA has established effective techniques when it comes to twisting and braiding of synthetic fiber ropes, with aim on enhancement of performance and service lifetime.
Double-twisting of rope yarns improves the resistance to fatigue and gives better performance of the rope in mooring operations, where cyclic loading can be very frequent.

Twisting stage 1: Single twisting		Twisting stage 2: Double twisting
X number of fibers	Rope yarn	Rope yarn Double twisted

Single twist / Double twist Comparison

Double twisted rope yarns exhibit higher resistance to abrasion and cyclic loading fatigue than single twisted rope yarns. The Double twisted manufacturing practice is selected for longer service lifetime of mooring ropes

Abrasion cycles to failure



Test performed in-house at 50% of rope yarn strength

Setup for rope yarn Abrasion Test: Steel roller grips in cyclic motion

MEG4 certification

Our ropes are certified according to the latestInternational Guidelines for mooring - MEG4

Mooring Equipment Guidelines 4th edition, OCIMF)

Published by OCIMF (Oil Companies International Marine Forum), MEG4 represents the best known mooring practice and reflects the move by the marine industry and regulators towards Human-Centered Design principles.

KATRADIS meets the requirements of OCIMF and provides mooring ropes compliant to MEG4 for the safe mooring of commercial vessels (tankers, bulk carriers, LNG / LPG, etc.).

Quality Control Testing

Quality Control is an essential part of all rope production stages that seals the effectiveness of our ropes. All fibre materials in our factory are tested through various properties by authorized personnel using high-tech equipment, in conditions according to DIN, ISO, and ASTM standards.

KATRADIS

EST. 1936

KATRADIS GROUP OF COMPANIES

Synthetic Mooring Ropes

Passion for High Quality

Our synthetic mooring ropes are trusted for many years in the shipping industry.

Improved 8-12-24

IMPROVED mooring ropes

The “best-selling” mixed rope

Combination of specially twisted NIKA-Steel® fibers with high tenacity industrial grade Polyester fibers. Unique construction for maximum performance and ease of handling.Stabilized against UV degradation.

BENEFITS

- Floating
- Long service lifetime
- Same strength efficiency in both wet & dry conditions
- Rotation resistant
- Ideal for applications requiring floating properties and resistance to abrasion
- Excellent endurance in mooring, anchoring and towing (Bulk Carrier- Container- Passenger- Tanker and military vessels)
- Balanced structure, accordant to international standard EN ISO 10556.
- Excellent UV and chemical resistance
- LR Type Approval as per MEG4

IMPROVED 8

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
40	79,0	173,8	34,5	31,4
44	96,0	211,2	40,8	37,1
48	115,0	253,0	48,1	43,7
52	136,0	299,2	54,3	49,4
56	156,0	343,2	63,8	58,0
60	180,0	396,0	70,1	63,7
64	208,0	457,6	81,5	74,1
68	234,0	514,8	89,9	81,7
72	260,0	572,0	100,3	91,2
76	290,0	638,0	112,9	102,6
80	321,0	706,2	125,4	114,0
84	352,0	774,4	134,9	122,6
88	383,0	842,6	141,9	129,0
92	423,5	931,7	152,4	138,6
96	464,0	1020,8	166,0	150,0

SPECIFICATIONS

Specific gravity	0.99 (Floating)
Elongation at Break	15%-18%
Melting point	165°C(NIKA-Steel®) / 265°C (PES)

IMPROVED 24-12

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
40	79,0	173,8	34,5	31,4
44	96,0	211,2	40,8	37,1
48	115,0	253,0	48,1	43,7
52	136,0	299,2	54,3	49,4
56	156,0	343,2	63,8	58,0
60	180,0	396,0	70,1	63,7
64	208,0	457,6	81,5	74,1
68	234,0	514,8	89,9	81,7
72	260,0	572,0	100,3	91,2
76	290,0	638,0	112,9	102,6
80	321,0	706,2	125,4	114,0
84	352,0	774,4	134,9	122,6
88	383,0	842,6	141,9	129,0
92	423,5	931,7	152,4	138,6
96	464,0	1020,8	166,0	150,0

Ultra 8-12-24

Efficient and Durable

Increased percentage of high tenacity Polyester fibers combined with NIKA-Steel® fibers, designed for enhanced strength in mooring operations. Stabilized against UV degradation.

BENEFITS

- High tenacity properties
- Firm handling
- Easy to handle
- Robust construction
- High quality raw materials
- Maintaining the same strength in wet and dry conditions
- Rotation resistant construction which is important for the overall performance.
- Excellent UV and chemical resistance.
- Manufactured according to EN ISO 10556.

ULTRA 8

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
36	71,0	156,2	28,9	26,3
40	89,0	195,8	35,9	32,6
44	107,0	235,4	42,2	38,4
48	128,0	281,6	49,7	45,1
52	151,0	332,2	56,0	50,9
56	173,0	380,6	65,4	59,5
60	201,0	442,2	72,9	66,3
64	225,0	495,0	83,4	75,9
68	257,0	565,4	92,9	84,4
72	289,0	635,8	103,4	94,0
76	324,0	712,8	116,1	105,5
80	358,0	787,6	126,7	115,1
84	395,0	869,0	137,8	125,2
88	430,0	946,0	152,0	138,2

SPECIFICATIONS

Specific gravity	1.11
Elongation at Break	15%-18%
Melting point	165°C(NIKA-Steel®)/265°C (PES)

ULTRA 24-12

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
36	71,0	156,2	28,9	26,3
40	89,0	195,8	35,9	32,6
44	107,0	235,4	42,2	38,4
48	128,0	281,6	49,7	45,1
52	151,0	332,2	56,0	50,9
56	173,0	380,6	65,4	59,5
60	201,0	442,2	72,9	66,3
64	225,0	495,0	83,4	75,9
68	257,0	565,4	92,9	84,4
72	289,0	635,8	103,4	94,0
76	324,0	712,8	116,1	105,5
80	358,0	787,6	126,7	115,1
84	395,0	869,0	137,8	125,2
88	430,0	946,0	152,0	138,2

NIKA-Flex 8-12-24

Strong and flexible

Optimized construction for achieving very high strength and wear resistance. Manufactured from equal percentages of NIKA-Steel® and high tenacity polyester fibers (w/w 50%-50% respectively). Stabilized against UV degradation.

BENEFITS

- Strong performance
- Very high abrasion resistance
- Firm handling
- Reduced operational cost due to extended service lifetime
- Easy operation for your safety
- Structural stability
- High quality raw materials
- Same strength in wet and dry conditions
- Rotation resistant construction which is important for the overall performance.
- Excellent UV and chemical resistance.
- Manufactured in custom made colors and rope lengths according to EN ISO 10556.

NIKA-FLEX 8

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
40	102,0	224,4	44,0	40,0
44	124,0	272,8	52,0	46,8
48	147,0	323,4	60,0	54,0
52	172,0	378,4	70,0	63,0
56	200,0	440,0	81,0	72,9
60	230,0	506,0	91,0	81,9
64	262,0	576,4	103,0	92,7
68	296,0	651,2	116,0	104,4
72	331,0	728,2	128,0	115,2
76	370,0	814,0	145,0	130,5
80	409,0	899,8	159,0	143,1
84	453,0	996,6	175,0	157,5
88	496,0	1091,2	198,0	180,0
92	543,0	1194,6	213,5	192,2
96	590,0	1298,0	229,0	206,1

SPECIFICATIONS

Specific gravity	1.14
Elongation at Break	15%-18%
Melting point	165°C(NIKA-Steel®)/265°C (PES)

NIKA-FLEX 24-12

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
40	102,0	224,4	44,0	40,0
44	124,0	272,8	52,0	46,8
48	147,0	323,4	60,0	54,0
52	172,0	378,4	70,0	63,0
56	200,0	440,0	81,0	72,9
60	230,0	506,0	91,0	81,9
64	262,0	576,4	103,0	92,7
68	296,0	651,2	116,0	104,4
72	331,0	728,2	128,0	115,2
76	370,0	814,0	145,0	130,5
80	409,0	899,8	159,0	143,1
84	453,0	996,6	175,0	157,5
88	496,0	1091,2	198,0	180,0
92	543,0	1194,6	213,5	192,2
96	590,0	1298,0	229,0	206,1

Reduced Snap Back ropes - RSB

Maximum Safety in Mooring operations

IMPROVED 24-12 RSB

Developed for maximum safety on-board due to the specified construction engineered for reduced snap-back reaction.

BENEFITS

- Floating
- Human-centered design for increased safety in mooring operations
- Extended service lifetime
- Robust rope construction
- High quality raw materials
- Same strength in wet and dry conditions
- Very good chemical resistance.

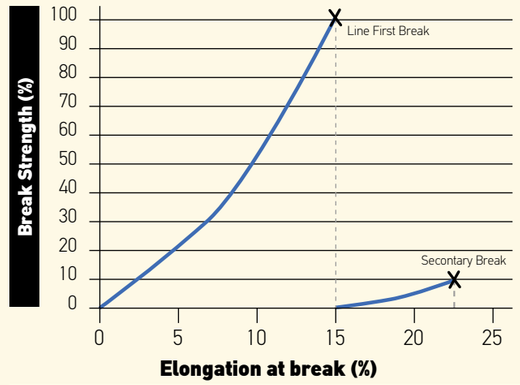
IMPROVED 24-12 RSB

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
36	73,1	160,8	28,6	26,0
40	85,0	187,0	35,5	32,3
44	102,0	224,4	41,8	38,0
48	121,0	266,2	49,2	44,7
52	142,0	312,4	55,4	50,4
56	162,0	356,4	64,8	58,9
60	186,0	409,2	72,2	65,6
64	217,6	478,7	82,6	75,1
68	243,6	535,9	92,0	83,6
72	269,6	593,1	102,4	93,1
76	299,6	659,1	115,0	104,5
80	330,6	727,3	125,4	114,0
84	366,4	806,1	136,4	124,0
88	397,4	874,3	150,5	136,8

SPECIFICATIONS

Specific gravity	0.99 (Floating)
Elongation at First break	15%-18%
Melting point	165°C(NIKA-Steel®) / 265°C (PES) 218°C (RSB member)

Break Strength / Elongation graph



The two-step partition of the rope is attributed to the RSB member that exhibits higher elongation and restraints the extreme snap-back effect when the rope is stretched to break.

NIKA-CORD

The “Double-twisted” polyolefin rope

Made of Double twisted NIKA-Steel® yarns in 8-strand braided construction. Superior resistance to abrasion and cyclic loading fatigue resulting in very long service lifetime compared to commonly used polyolefin ropes.

BENEFITS

- Floating
- Very high abrasion and fatigue resistance
- Increased service life time compared to common polypropylene ropes
- Easy handling
- Excellent endurance to cyclic loading.
- Manufactured according to latest edition of ISO 10572 standard and latest recommendations of OCIMF for the safe mooring of tanker vessels.

> Ideal choice for polyolefin rope in mooring, anchoring and towing for bulk carriers, containers & passenger vessels
> Suitable for mooring in areas of high UV sunlight exposure conditions
> Same strength in wet and dry condition

NIKA-CORD 8

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
40	72,0	158,4	27,9	25,1
44	88,0	193,6	33,3	30,0
48	104,0	228,8	39,2	35,3
52	122,0	268,4	45,7	41,1
56	142,0	312,4	52,4	47,2
60	163,0	358,6	59,4	53,5
64	185,0	407,0	67,0	60,3
68	210,0	462,0	75,3	67,8
72	234,0	514,8	83,6	75,2
76	262,0	576,4	92,5	83,3
80	290,0	638,0	101,5	91,4
84	320,0	704,0	111,4	100,3
88	351,0	772,2	121,3	109,2
92	383,5	843,7	132,0	118,8
96	416,0	915,2	142,7	128,4

SPECIFICATIONS

Specific gravity	0.91 (Floating)
Elongation at Break	15%-18%
Melting point	165°C(NIKA-Steel®)/265°C (PES)

NIKA-FORCE

The extra strong polyolefin rope

Made by the superior Nika-Steel® fibers, 8-strand rope construction. Very high tenacity and long service lifetime.

BENEFITS

- Floating
- High strength efficiency
- Very easy splicing when needed
- Rotation resistant
- Excellent UV and chemical resistance
- Manufactured according to latest edition of ISO 10572 standard and latest recommendations of OCIMF for the safe mooring of tanker vessels

> Fit for mooring, anchoring and towing.
> Same strength in wet and dry conditions
> High quality raw materials

NIKA-FORCE 8

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
40	72,0	158,4	29,0	26,1
44	88,0	193,6	36,0	32,4
48	104,0	228,8	42,0	37,8
52	122,0	268,4	48,0	43,2
56	142,0	312,4	55,0	49,5
60	163,0	358,6	62,0	55,8
64	185,0	407,0	71,0	63,9
68	210,0	462,0	81,0	72,9
72	234,0	514,8	90,0	81,0
76	262,0	576,4	100,0	90,0
80	290,0	638,0	109,0	98,1
84	320,0	704,0	118,0	106,2
88	351,0	772,2	128,0	115,2
92	383,5	843,7	139,5	125,6
96	416,0	915,2	151,0	135,9

SPECIFICATIONS

Specific gravity	0.91 (Floating)
Elongation at Break	15%-18%
Melting point	165°C(NIKA-Steel®)/265°C (PES)

NIKA-POLYESTER 8-12-24

Made for Superior endurance

Excellent tension-tension (cyclic loading) performance. Manufactured from 100% Polyester fibers of very high tenacity. Stabilized against UV degradation.

BENEFITS

- Very high abrasion resistance
- Firm handling
- Extended service lifetime
- Easy to resplice when needed
- Robust rope construction
- High quality raw materials
- Same strength in wet and dry conditions
- Intended for applications that require high resistance to abrasion.
- Very good chemical resistance.
- Manufactured in custom made colors and rope lengths according to ISO 1141.

NIKA-POLYESTER 8

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
44	141,0	310,2	43,9	39,9
48	175,0	385,0	54,3	49,4
52	196,0	431,2	61,7	56,1
56	238,0	523,6	74,3	67,5
60	262,0	576,4	80,5	73,2
64	310,0	682,0	96,2	87,5
68	344,0	756,8	106,6	96,9
72	378,0	831,6	114,0	103,6
76	422,0	928,4	125,4	114,0
80	466,0	1025,2	141,1	128,3
84	512,0	1126,4	154,7	140,6
88	559,0	1229,8	167,2	152,0
92	614,5	1351,9	185,5	168,7
96	670,0	1474,0	203,8	185,3

SPECIFICATIONS

Specific gravity	1.38
Elongation at Break	18%
Melting point	265°C

NIKA-POLYESTER 24-12

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
44	141,0	310,2	43,9	39,9
48	175,0	385,0	54,3	49,4
52	196,0	431,2	61,7	56,1
56	238,0	523,6	74,3	67,5
60	262,0	576,4	80,5	73,2
64	310,0	682,0	96,2	87,5
68	344,0	756,8	106,6	96,9
72	378,0	831,6	114,0	103,6
76	422,0	928,4	125,4	114,0
80	466,0	1025,2	141,1	128,3
84	512,0	1126,4	154,7	140,6
88	559,0	1229,8	167,2	152,0

NIKA-NYLON 8-12-24

The “Elastic” rope for marine operations

The perfect choice for applications requiring high elongation properties during operation. Made of 100% high tenacity Polyamide (Nylon) material. Stabilized against UV degradation.

BENEFITS

- Shock load absorbing properties
- Easy to handle
- Finest quality Nylon material
- Robust rope construction
- High quality raw materials
- Same strength in wet and dry conditions
- Ideal type for mooring tails connected with wire ropes or high modulus ropes.
- Very good chemical resistance.
- Manufactured according to ISO 1140.

NIKA-NYLON 8

Size (Diam)	Weight (+/- 5%)		MBL (ISO 2307)	LDBF (MEG4)
mm	Kilos /100m	Kilos /220m	Tons	Tons
40	99	218	40	34,0
44	120	264	48	40,8
48	142	312	58	49,3
52	166	365	67,5	57,4
56	193	425	77	65,5
60	221	486	88,5	75,2
64	253	557	101	85,9
68	286	629	115	97,8
72	319	702	130	110,5
76	357	785	143,5	122,0
80	394	867	158,5	134,7
84	437	961	175	148,8
88	477	1049	192	163,2
96	568	1250	213	181,0

SPECIFICATIONS

Specific gravity	1.14
Elongation at Break	30%
Melting point	218°C

NIKA-NYLON 24-12

Size (Diam)	Weight (+/- 5%)		MBL (ISO 2307)	LDBF (MEG4)
mm	Kilos /100m	Kilos /220m	Tons	Tons
40	99	218	40	34,0
44	120	264	48	40,8
48	142	312	58	49,3
52	166	365	67,5	57,4
56	193	425	77	65,5
60	221	486	88,5	75,2
64	253	557	101	85,9
68	286	629	115	97,8
72	319	702	130	110,5
76	357	785	143,5	122,0
80	394	867	158,5	134,7
84	437	961	175	148,8
88	477	1049	192	163,2
96	568	1250	213	181,0

KATRADIS

EST. 1936

KATRADIS GROUP OF COMPANIES

Covered and DoubleBraided Ropes

Made for demanding operations

- Ideal for mooring lines installed on winches
- Designed for extended service life

Covered Ropes

NIKA-STEEL COVERED

Supreme winchline for effective mooring.
NIKA-Steel core rope overbraided by a non-load bearing Polyester jacket. UV stabilized materials for resistance against degradation due to sunlight.

BENEFITS
- Higher resistance against external abrasion compared to single braided ropes
- Rotation Resistant
- Excellent performance on winches
- Floating
- Very good resistance against UV sunlight & chemicals
- Very good performance during cyclic loading conditions
- Not affected by moisture

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
40	94	206,8	36,0	32,4
44	113	248,6	45,8	41,22
48	135	297	56,2	50,58
52	158	347,6	62,7	56,43
56	180	396	71,9	64,71
60	212	466,4	87,3	78,57
64	244	536,8	103,8	93,42
68	275	605	112,1	100,89
72	304	668,8	123,7	111,33
76	340	748	142,3	128,07
80	374	822,8	153,2	137,88
84	416	915,2	164,9	148,41
88	454	998,8	184,5	166,05

SPECIFICATIONS	
Specific gravity	0.99 (Floating)
Elongation at Break	15% - 18%
Melting point	165°C (NIKA-Steel®) / 265°C (PES)

NIKA-POLYESTER COVERED

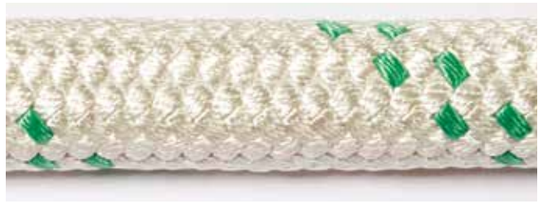
High Tenacity marine grade Polyester material both in core (load bearing) and cover (non-load bearing) construction.

BENEFITS
- Very high service life
- Excellent abrasion resistance
- Torque free
- UV stabilized rope construction
- Excellent resistance to tension-tension fatigue
- Ultimate endurance in mooring operations

Size (Diam)	Weight (+/- 5%)		MBL (ISO 2307)	LDBF (MEG4)
mm	Kilos /100m	Kilos /220m	Tons	Tons
40	128	281,6	61,6	58,5
44	147	323,4	73,4	69,7
48	173,3	381,3	85,2	80,9
52	196,3	431,9	99,5	94,5
56	226,7	498,7	114,4	108,7
60	253,7	558,1	129,7	123,2
64	282,7	621,9	147,6	140,2
68	310,1	682,2	162,3	154,2
72	346,1	761,4	180,2	171,2
76	397,6	874,7	204,2	194,0
80	427,6	940,7	222,2	211,1
84	468	1.029,6	242,6	230,5
88	505.3	1.111,7	252,2	239,6

SPECIFICATIONS	
Specific gravity	1.38
Elongation at Break	18%
Melting point	265°C

NIKA-NYLON COVERED



Finest quality Polyamide material (100% Nylon) exhibiting very high elongation. Load bearing core rope overbraided by a non-load bearing cover for excellent resistance to external abrasion.

BENEFITS
- Flexible in handling
- Rotation Resistant
- Shock load absorbing properties
- Ideal choice for applications requiring high elongation properties
- Very good resistance to cyclic loading
- When wet, there is expected strength loss of approximately 10% which is recovered once dry again

Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn
40	104	229	49,7	45,2
44	126	277	63,6	57,8
48	150	330	71,7	65,1
52	176	388	87,5	79,5
56	205	450	105,3	95,8
60	234	515	71,0	63,9
64	267	587	136,5	124,1
68	300	661	156,7	142,5
72	337	742	175,6	159,6
76	376	827	192,3	174,8
80	417	917	216,5	196,8
84	460	1012	226,9	206,2
88	505	1111	253,6	230,5

SPECIFICATIONS	
Specific gravity	1.14
Elongation at Break	30%
Melting point	218°C

NIKA-STEEL MULTI COVER

High abrasion resistant and non-load bearing jacket covering a NIKA-Steel core rope. UV stabilized materials for resistance against degradation due to sunlight.

BENEFITS
- Floating
- Rotation Resistant
- Easy warping on winchdrums
- Excellent resistance to abrasion, sunlight & chemicals
- Good resistance to cyclic loading
- Equal strength in wet and dry conditions

Size (Diam)	Weight (+/- 5%)		MBL (ISO 2307)	LDBF (MEG4)
mm	Kilos /100m	Kilos /220m	Tons	Tons
40	75,5	166	30	28,5
44	93,5	205,5	37	35,2
48	110	242	43	40,9
52	128,5	283	50	47,5
56	149	327,5	57	54,2
60	172,5	379,5	64	60,8
64	194	427	73	69,4
68	221	486	84	79,8
72	247	543	93	88,4
76	275	605	104	98,8
80	304,5	670	115	109,3
84	336	739	123	116,9
88	368,5	810,5	134	127,3

SPECIFICATIONS	
Specific gravity	0.91
Elongation at Break	15%-18%
Melting point	165°C

Double Braided Ropes

NIKA-STEEL DOUBLEBRAIDED

NIKA-Steel core rope overbraided by a robust load-bearing cover of mixed NIKA-Steel /Polyester material.

BENEFITS
- Floating
- Very long service lifetime
- Ideal for installation on mooring winches
- Easy to handle, rotation resistant
- Very good performance during cyclic loading conditions
- Not affected by moisture

NIKA-POLYESTER DOUBLEBRAIDED

Industrial grade Polyester (100%) material. Double braided construction of enhanced endurance against external and internal abrasion.

BENEFITS
- Flexible
- Torque free
- Easy to operate on winchdrums and fairleads
- Optimal resistance against tension-tension fatigue
- Not affected by moisture

NIKA-NYLON DOUBLEBRAIDED

High Tenacity Polyamide material (100% Nylon), with the most effective ability to absorb dynamic loads.

BENEFITS
- Flexible in handling
- The highest elongation properties
- Finest quality of Polyamide raw material
- Twist resistant
- UV stabilized material

	NIKA-STEEL DOUBLEBRAIDED				NIKA-POLYESTER DOUBLEBRAIDED				NIKA-NYLON DOUBLEBRAIDED			
Nom. Size (Diam)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)	Weight (+/- 5%)		MBL (acc. ISO 2307)	LDBF (acc. MEG4)
mm	kg / 100m mtr	kg / 220 mtr	tn	tn	kg / 100m mtr	kg / 220 mtr	tn	tn	kg / 100m mtr	kg / 220 mtr	tn	tn
36	70,0	154,0	28,0	25,2	100,9	222,1	28,8	25,9	80,5	177,1	30,2	27,2
40	88,0	193,6	34,0	30,6	125,4	276,0	35,3	31,8	99,0	217,8	37,2	33,5
44	106,0	233,2	39,0	35,1	150,9	332,0	42,4	38,2	120,0	264,0	44,9	40,4
48	125,0	275,0	48,0	43,2	180,3	396,7	50,2	45,2	143,0	314,6	53,4	48,1
52	148,0	325,6	55,0	49,5	211,7	465,7	58,6	52,7	168,0	369,6	62,6	56,3
56	169,0	371,8	64,0	57,6	245,0	539,0	67,4	60,7	195,0	429,0	72,5	65,3
60	200,0	440,0	71,0	63,9	281,3	618,8	77,1	69,4	223,0	490,6	83,1	74,8
64	228,0	501,6	83,0	74,7	319,5	702,9	87,3	78,5	254,0	558,8	94,6	85,1
68	257,0	565,4	92,8	83,5	362,1	796,6	98,2	88,3	286,0	629,2	107,3	96,5
72	285,0	627,0	103,0	92,7	404,7	890,4	109,1	98,2	321,0	706,2	120,0	108,0
76	319,0	701,8	116,0	104,4	452,3	995,1	121,6	109,5	358,0	787,6	133,6	120,3
80	353,0	776,6	126,0	113,4	499,8	1099,6	134,2	120,7	397,0	873,4	147,2	132,5
84	390,0	858,0	137,0	123,3	552,3	1215,1	147,8	133,0	438,0	963,6	162,5	146,3
88	425,0	935,0	150,0	135,0	604,7	1330,3	161,4	145,3	481,0	1058,2	177,8	160,0
92	463,0	1018,6	165,0	148,5	662,5	1457,5	176,2	158,5	526,5	1158,3	194,7	175,2
96	501,0	1102,2	180,0	162,0	720,3	1584,7	190,9	171,8	572,0	1258,4	211,6	190,4

SPECIFICATIONS		SPECIFICATIONS		SPECIFICATIONS	
Specific gravity	0.99 (Floating)	Specific gravity	1.38	Specific gravity	1.14
Elongation at Break	15% - 18%	Elongation at Break	18%	Elongation at Break	30%
Melting point	165°C (NIKASteel®) / 265°C (PES)	Melting point	265°C	Melting point	218°C

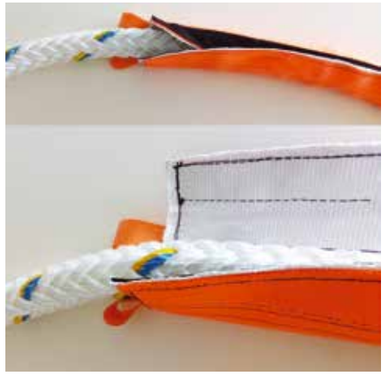
Extra Protective sleeves for abrasion resistance

NIKA-GUARD

The Polyester protection for your rope

An excellent cost-effective option to protect your ropes!
Nika® Guard is a Flat Polyester webbing pad. The Velcro® scratch tape, firmly stitched on the sleeve guard, is used for quick & easy installation and removal.
Length: 2m

FEATURES:
• Fixed or adjustable for easy positioning • Extends significantly the service life of synthetic ropes • Abrasion resistant • Light and flexible



NIKA-GUARD ULTRADOUBLE

The special Double-layered webbing for chafe protection

Developed for excellent performance and protection of synthetic mooring lines against abrasion conditions during mooring operations. It is manufactured using a combination of High Tenacity polyester and UHMWPE webs in a double-layer sleeve construction. The polyester layer of the webbing sleeve is fixed on the outer side while the UHMWPE layer protects the rope from the inside
Length 2,5 m

FEATURES:
• Fixed or adjustable for easy positioning • Smooth surface protection upon the mooring line • Abrasion and cut resistance • Easy attached on the line using Velcro scratch tape

NIKA-PROTECTOR

High performance protection for your mooring line

Nika® protectors are manufactured by using UHMWPE fibers which are coated with Nika® Lube for superior abrasion resistance. Nika® Protectors are also coated externally with Nika® Thane, in order to improve protector-to-chock gripping performance and in order to reduce sliding.
Length 2,5 m

FEATURES:
• Fixed or adjustable for easy positioning • Extends significantly the service life of synthetic High Modulus Ropes • Superior abrasion and cut resistance
• Extremely thick layer of protection • Very light

Mooring ropes are constantly operating in various working conditions and come in contact with deck surfaces where the use of protective sleeves is crucial for their service life.
KATRADIS has developed a series of protective sleeves for safer operations and optimizing the working conditions of mooring ropes.

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Mooring Tails

Strong and Flexible connection with your main mooring line.

Mooring Tails

Which mooring tails are appropriate for your application?

The desired elasticity
NIKA-Nylon mooring tails exhibit the highest elongation properties amongst synthetic marine ropes, which makes this tail type ideal for reducing the dynamic loads that are introduced during mooring operations. NIKA-Nylon tails of 22m length are recommended for operations at exposed terminals where shock loads are more frequent.
Medium to high elasticity is expected by other types of mooring tails (Mixed Polyester/ Nikasteel® and 100% Polyester respectively).

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Medium to high elasticity is expected by other types of mooring tails (Mixed Polyester/ Nikasteel® and 100% Polyester respectively).

There are two basic types of Mooring tails. The single leg and the grommet type:

Single leg

Single leg tails are the most common type of tails used in a variety of applications (mooring, towing etc.) This construction has standard two soft eyes, one of 1,8m (6 feet) length and the other of 0,9m (3 feet) length.
Standard lengths for tankers, LNG and LPG vessels are 11m and 22m but any length can be produced according to client requirements.

Grommet Type

Grommet type tails are used in special applications requiring high strengths.
They have standard two soft eyes, one of 1,8m (6 feet) length and the other of 0,9m (3 feet) length.
The eyes are formed by lashings (seizing the two rope bodies together to form an eye).
The strength of a Grommet mooring tail is 1,6 times the strength of a single leg (of the same material, construction and size) and its length depends on the customer's special requirements.

Retirement criteria of mooring tails

It is recommended as per MEG4 to retire mooring tails when the TDBF is reduced to 75% of the ship design MLB (MLBSD), unless inspection calls for earlier retirement. For more information consult the User's Manual for Synthetic Mooring Tails (provided by KATRADIS SA).

NIKA-NYLON 8-12-24

Nylon tails exhibit excellent dynamic load and shock absorption properties.
22m Nylon Mooring tails are ideal in exposed berths/ terminals.

Nom. Size (Diam)	MBL (acc. ISO 2307)	TDBF (acc. MEG4)
mm	Tons	Tons
68	115,0	101,2
72	130,0	114,4
76	143,5	126,3
80	158,5	139,5
84	175,0	154,0
88	192,0	169,0
92	202,5	178,2
96	213,0	187,4

Specific gravity	1,14
Melting point:	218°C
Elongation at breaking:	30%
Fiber water absorption	3-5%
Chemical resistance	Very Good

NIKA-POLYESTER 8-12-24

Polyester tails are fit for applications where abrasion resistance is needed. Made of high-Tenacity marine grade Polyester fibers.

Nom. Size (Diam)	MBL (acc. ISO 2307)	TDBF (acc. MEG4)
mm	Tons	Tons
68	106,6	96,9
72	114,0	103,6
76	125,4	114,0
80	141,1	128,3
84	154,7	140,6
88	167,2	152,0
92	185,5	168,7
96	203,8	185,3

Specific gravity	1,38
Melting point:	265°C
Elongation at breaking:	18%
Fiber water absorption	0,1%
Chemical resistance	Very Good

NIKA-FLEX 12 RSB

The special Reduced Snap Back design includes internal member made to protect from the recoiling in case of partition.
NIKA-FLEX RSB tails is the choice for safer mooring operations

Nom. Size (Diam)	MBL (acc. ISO 2307)	TDBF (acc. MEG4)
mm	Tons	Tons
68	116,0	110,2
72	128,0	121,6
76	145,0	137,8
80	159,0	151,1
84	175,0	166,3
88	193,0	180,0
92	213,5	202,8
96	229,0	217,6

Specific gravity	1.14
Melting point:	165°C NIKA-Steel® / 265°C Polyester
Elongation at breaking:	15-18%
Fiber water absorption	0,1 %
Chemical resistance	Very Good

NIKA-FLEX 8-12-24

Flex tails are specially engineered for demanding applications where high strength and excellent abrasion resistance are a must.

Nom. Size (Diam)	MBL (acc. ISO 2307)	TDBF (acc. MEG4)
mm	Tons	Tons
68	116,0	110,2
72	128,0	121,6
76	145,0	137,8
80	159,0	151,1
84	175,0	166,3
88	193,0	180,0
92	213,5	202,8
96	229,0	217,6

Specific gravity	1.14
Melting point:	165°C NIKA-Steel® / 265°C Polyester
Elongation at breaking:	15-18%
Fiber water absorption	0,1 %
Chemical resistance	Very Good

Eye Protection

Polyester Eye Protector

Special braided polyester sleeves

Polyester Eye Splice Protector is a special braided cover designed for extra protection of the eye splices. In demanding applications, the Polyester Eye Splice Protector will satisfy every end-user with its endurance. Polyester Eye Splice Protector is made from specially twisted polyester fibers. The application of Nika® Thane-P coating reduces both internal and external friction and offers excellent protection.

FEATURES:

• Excellent abrasion resistance • UV resistance • Flexible
• Excellent choice for tails

Mooring Connection

Connecting the mooring tails with the main high modulus line or wire requires attention to detail and effective equipment in order to ensure that 100% of the rope performance is achieved. Below there are given two most applicable types of line-tail connection.

Cow-Hitch

Approved by MEG4 (OCIMF). Field experience and extensive in-house testing has shown zero impact on the mooring line's strength with this type of connection, if prepared with special NIKA-Eye Protection.

FEATURES:

• Floating mooring line when used with a floating tail • Reduced cost • Very easy to handle • Light and flexible • By using Nika Eye protection we avoid the reduction of the mooring line's strength

Link Mandal or Tonsberg

A standard practice when connecting the mooring tail with a wire-rope or mooring ropes.

FEATURES:

• Robust connection • Used without reduction of mooring line strength

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- Synthetic Mixed and High Modulus Ropes
- Steel Wire Ropes
- Sacrificial Anodes
- Anchors & Anchor Chains
- Port Development Equipment
- Vessel Deck Equipment
- Lashing Equipment
- Aquaculture and fishing ropes and nets

Katradis Global Network

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Asia: Singapore (Singapore) I South Korea (all ports) I China (Hong Kong, Shanghai, Qingdao, Zhenjiang & other ports)
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KATRADIS GROUP OF COMPANIES - Synthetic mooring ropes

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High Quality Synthetic Mooring Ropes for LNG / LPG Carriers and Tankers
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