

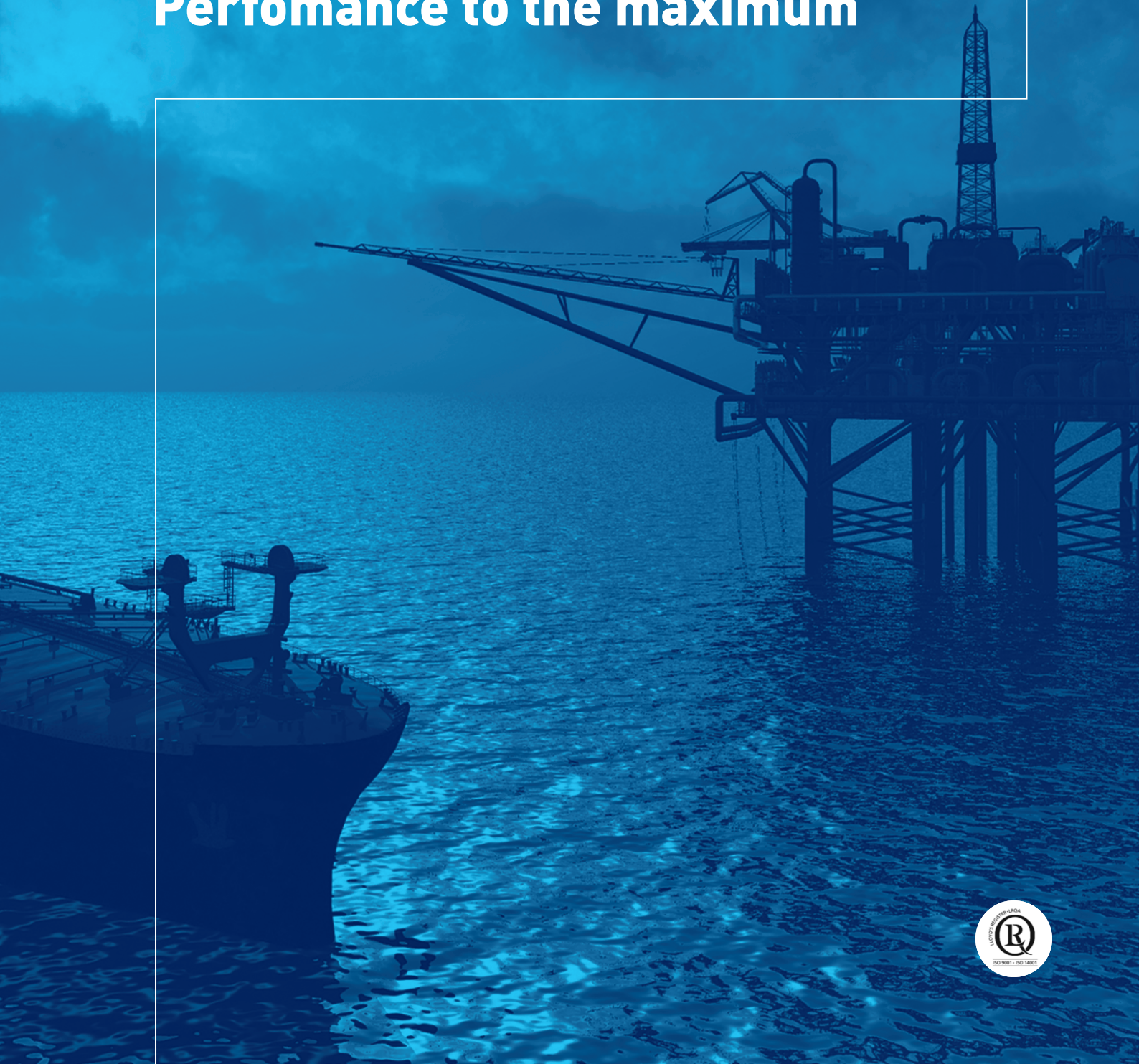


EST. 1936

KATRADIS GROUP OF COMPANIES

# Offshore Mooring Ropes

**Performance to the maximum**







KATRADIS GROUP OF COMPANIES

## Offshore Mooring Ropes

**KATRADIS MARINE ROPES INDUSTRY S.A. produces high standard quality marine ropes for Offshore Applications.**

Our ropes are suitable for applications requiring lightweight and high tenacity properties. They are designed for long term use in Heavy lifting and Installation operations. Our **new fully equipped R & D department** is equipped with state-of-the-art next generation technology at every step of quality control.

Since 1936 we have advanced our extensive expertise in the design and development of synthetic mooring ropes, which constitute our mainline products. Our rope factory in Greece, whose site covers an area of 30000 m<sup>2</sup>, is one of the most technologically advanced factories in Europe, manufacturing top quality ropes such as the Siri® High Performance Ropes (HMPE, ARAMID and LCP) and other high quality synthetic ropes. By implementing continuous and breakthrough R&D activities by our expert Engineers, we can ensure that our high standards quality synthetic ropes will not only meet but also exceed some of the strictest demands that are set by the Shipping Industry.

**Where Experts and Technology Make the Difference...**



# NIKA-Siri® S12 DB

## The Premium of Safety

with Siri® Heat Setting technology

### Nika Siri® S-12 SB

HMPE Nika fibers, 12 Strands Core, Siri® Heat Setting Technology, Special Nika® Lube & Nika® Thane Coating.

#### BENEFITS

- Floating
- Safe, due to low recoil and snapback
- Very easy to inspect
- Extremely easy to handle, due to their smaller diameter, less weight and flexibility when compared with a wire rope of the same strength.
- Excellent tension-tension fatigue life
- Long lifetime

#### Boost protection

**Nika Siri® S-12 DB P-cover:** Double Braided with High Tenacity Polyester cover for a longer lifetime and reduced snapback.

**Nika Siri® S-12 DB M-cover:** Double Braided with Mixed High Tenacity Polyester & UHMWPE cover for longer lifetime and reduced snapback.

**Nika Siri® S-12 DB U-cover:** Double Braided with UHMWPE cover for maximum abrasion resistance, excellent temperature monitoring and reduced snapback.

| Size | Size | Weight (+/- 5%)  |              |               | Minimum Breaking Load |
|------|------|------------------|--------------|---------------|-----------------------|
|      |      | POLYESTER JACKET | MIXED JACKET | UHMWPE JACKET |                       |
| CIRC | DIAM | kilos / 100m     | kilos / 100m | kilos / 100m  | tons                  |
| 2"   | 16   | 17,1             | 15,9         | 15,1          | 20,1                  |
| 2 ¼" | 18   | 22,2             | 21,1         | 20            | 26,5                  |
| 2 ½" | 20   | 25,8             | 24,5         | 23,4          | 32,9                  |
| 2 ¾" | 22   | 31,6             | 30           | 28,6          | 40,1                  |
| 3"   | 24   | 38,6             | 36,8         | 35            | 47,9                  |
| 3 ¼" | 26   | 45,4             | 43,2         | 41            | 55,3                  |
| 3 ½" | 28   | 51,9             | 49,4         | 46,9          | 65                    |
| 3 ¾" | 30   | 58,3             | 55,5         | 52,7          | 72,8                  |
| 4"   | 32   | 68               | 64,8         | 61,6          | 79,7                  |
| 4 ¼" | 34   | 75,8             | 72,2         | 68,6          | 84,5                  |
| 4 ½" | 36   | 83,2             | 79,2         | 75,2          | 94,5                  |
| 4 ¾" | 38   | 93,2             | 88,8         | 84,4          | 106                   |
| 5"   | 40   | 104,7            | 99,7         | 94,7          | 120,2                 |
| 5 ¼" | 42   | 115              | 110,9        | 105,4         | 130,9                 |
| 5 ½" | 44   | 128,4            | 122,3        | 116,2         | 144,9                 |
| 5 ¾" | 46   | 139,4            | 132,8        | 126,2         | 158                   |
| 6"   | 48   | 149,5            | 143          | 138,7         | 175,6                 |
| 6 ¼" | 50   | 167              | 159          | 151,1         | 190,1                 |
| 6 ½" | 52   | 176,4            | 168          | 159,6         | 207,4                 |
| 7"   | 56   | 196              | 185          | 169,9         | 220,1                 |
| 7 ½" | 60   | 218,8            | 208,4        | 198           | 257,5                 |
| 8"   | 64   | 250,3            | 238,4        | 226,5         | 284,5                 |
| 8 ½" | 68   | 283,3            | 269,8        | 256,3         | 316,4                 |
| 9"   | 72   | 324,2            | 308,8        | 293,4         | 352,5                 |
| 9 ½" | 76   | 359,1            | 342          | 324,9         | 391,8                 |
| 10"  | 80   | 403,1            | 383,9        | 364,7         | 459,5                 |
| 11"  | 88   | 514,1            | 488          | 465,1         | 545,9                 |
| 12"  | 96   | 567,6            | 540,6        | 513,6         | 625,3                 |

**Specific Gravity:** 1.07 (PES jacket) / 1.00 (Mixed jacket) / 0.97 (UHMWPE jacket)

**Elongation at breaking:** 3,5% (when new)

**Melting point:** 145°C (UHMWPE) - 256 °C (PES)

**Resistance to UV radiation:** Excellent

**Chemical Resistance:** Very Good



# NIKA-Siri® S12 SB

## Extremely Easy, Strong & Safe

with Siri® Heat Setting technology

### Nika Siri® S-12 SB

UHMWPE Nika fibers, 12 Strands Core, Siri® Heat Setting Technology, Special Nika® Lube Coating and extra Nika® Thane coating for gripping

#### BENEFITS

- Excellent grip
- Safe due to low recoil and snapback
- High strength stopper
- Very easy to inspect
- Very easy to handle due to its small diameter, flexibility and light weight.
- Floating

#### TECHNICAL DATA

#### NIKA-Siri® S-12 SB slings

| Size   | Size | Weight | Single leg MBL | Grommet MBL |
|--------|------|--------|----------------|-------------|
| CIRC   | DIAM | +/- 5% |                |             |
| inches | mm   | Kg/m   | tons           | tons        |
| 3 ¾"   | 30   | 0,54   | 85             | 136         |
| 4"     | 32   | 0,59   | 95             | 152         |
| 4 ¼"   | 34   | 0,64   | 101            | 161         |
| 4 ½"   | 36   | 0,72   | 110            | 176         |
| 4 ¾"   | 38   | 0,80   | 124            | 198         |
| 5"     | 40   | 0,89   | 136            | 217         |
| 5 ¼"   | 42   | 0,99   | 152            | 243         |
| 5 ½"   | 44   | 1,07   | 164            | 262         |
| 5 ¾"   | 46   | 1,15   | 180            | 287         |
| 6"     | 48   | 1,27   | 195            | 312         |
| 6 ¼"   | 50   | 1,38   | 205            | 328         |
| 6 ½"   | 52   | 1,44   | 221            | 353         |
| 7"     | 56   | 1,70   | 252            | 403         |
| 7 ½"   | 60   | 1,90   | 279            | 446         |
| 8"     | 64   | 2,25   | 312            | 499         |
| 8 ½"   | 68   | 2,57   | 354            | 566         |
| 9"     | 72   | 2,85   | 385            | 616         |
| 9 ½"   | 76   | 3,20   | 407            | 651         |
| 10"    | 80   | 3,41   | 432            | 691         |
| 11"    | 88   | 4,38   | 550            | 880         |
| 12"    | 96   | 5,15   | 610            | 976         |
| 13"    | 104  | 6,73   | 790            | 1.264       |
| 14"    | 112  | 7,85   | 910            | 1.456       |
| 15"    | 120  | 8,95   | 1.020          | 1.632       |
| 16"    | 128  | 9,96   | 1.095          | 1.750       |
| 18"    | 144  | 12,1   | 1.306          | 2.090       |
| 19"    | 152  | 13,3   | 1.396          | 2.233       |

**Specific Gravity:** 0.97

**Elongation at breaking:** 3.5% (when new)

**Melting point:** 145°C (UHMWPE)

**Resistance to UV radiation:** Excellent

**Chemical Resistance:** Very Good



# NIKA-Nylon 12-strand, 8-strand

**NIKA-Nylon ropes are used for Single point mooring operations. The high elasticity and superior resistance to cyclic loading conditions are the key performance characteristics in the offshore applications**



**Nika-Nylon 8-Strand Ropes** are made from 100% Nylon (Polyamide) fibers. Nylon fibers exhibit high elongation at break thus giving the Nika-Nylon ropes high elasticity and excellent shock absorption properties. Nika-Nylon ropes have very good resistance against abrasion, UV sunlight, chemicals and cyclic loading. Their non-rotating 8-strand construction makes them user friendly and easy to splice. They are ideal for applications where high elasticity and shock absorption properties are a must. Nika-Nylon ropes are produced according to international standards such as DIN EN ISO 1140, CI 1303 and MIL-R-24337. When wet they lose approximately 10%- 15% of their dry breaking strength which is recovered once dry again.



**Nika-Nylon 12/24-Strand Ropes** are made from 100% Nylon (Polyamide) fibers. Nylon fibers exhibit high elongation at break thus giving the Nika-Nylon ropes high elasticity and excellent shock absorption properties. Nika-Nylon ropes have very good resistance against abrasion, UV sunlight, chemicals and cyclic loading. They are rotation resistant, user friendly and easy to splice. They are ideal for applications where high elasticity and shock absorption properties are a must. Nika-Nylon ropes are produced according to international standards such as DIN EN ISO 1140 and MIL-R-24337. When wet they lose approximately 10%- 15% of their dry breaking strength which is recovered once dry again.

| TECHNICAL DATA   |      |        |                |             |
|------------------|------|--------|----------------|-------------|
| NYLON 8STR/12STR |      |        |                |             |
| Size             | Size | Weight | Single leg MBL | Grommet MBL |
| CIRC             | DIAM | +/- 5% |                |             |
| inches           | mm   | Kg/m   | tons           | tons        |
| 9"               | 72   | 3,19   | 130            | 130         |
| 9 1/2"           | 76   | 3,57   | 144            | 202         |
| 10"              | 80   | 3,94   | 159            | 223         |
| 11"              | 88   | 4,77   | 192            | 269         |
| 12"              | 96   | 5,70   | 213            | 299         |
| 13"              | 104  | 6,30   | 230            | 322         |
| 14"              | 112  | 7,85   | 265            | 371         |
| 15"              | 120  | 9,80   | 305            | 427         |
| 16"              | 128  | 10,90  | 360            | 504         |
| 18"              | 146  | 14,05  | 452            | 633         |
| 19"              | 154  | 15,45  | 485            | 679         |
| 20"              | 162  | 17,20  | 540            | 756         |

| NYLON 32STR |      |         |         |                       |
|-------------|------|---------|---------|-----------------------|
| Size        | Size | Weight  |         | Minimum Breaking Load |
| CIRC        | DIAM | +/- 5%  |         |                       |
| inches      | mm   | Kg/100m | Kg/220m | tons                  |
| 4 1/2"      | 36   | 80.5    | 177     | 31.8                  |
| 5"          | 40   | 99      | 218     | 40                    |
| 5 1/2"      | 44   | 120     | 264     | 47                    |
| 6"          | 48   | 143     | 315     | 58                    |
| 6 1/2"      | 52   | 168     | 370     | 69                    |
| 7"          | 56   | 195     | 429     | 79                    |
| 7 1/2"      | 60   | 223     | 491     | 91                    |
| 8"          | 64   | 254     | 559     | 104                   |
| 8 1/2"      | 68   | 286     | 629     | 117                   |
| 9"          | 72   | 321     | 706     | 131                   |
| 9 1/2"      | 76   | 358     | 788     | 148                   |
| 10"         | 80   | 397     | 873     | 163                   |
| 10 1/2"     | 84   | 438     | 964     | 178                   |
| 11"         | 88   | 481     | 1.058   | 194                   |
| 12"         | 96   | 572     | 1.258   | 236                   |

**Specific gravity:** 1.14  
**Melting point:** 218°C  
**Elongation at breaking:** 25-30%  
**Fiber Water Absorption:** 3-5%  
**Chemical resistance:** Very Good





# NIKA-Polyester 32,12,8-strand



**Nika-Polyester 8-Strand Ropes** are 100% made from High Tenacity Polyester fibers. Nika-Polyester ropes are known for their excellent strength and abrasion resistance properties. Nika-Polyester ropes are fit for applications requiring high breaking strength, excellent resistance against abrasion and shock absorption properties. Nika-Polyester ropes exhibit excellent resistance to UV sunlight, chemicals and cyclic loading. They maintain the same performance in wet and dry conditions. Their non-rotating 8-strand structure makes them extremely user friendly and easy to splice. Nika-Polyester ropes are produced according to international standards such as DIN EN ISO 1141 & CI 1304. They also comply with the latest regulations and recommendations for the safe mooring of tanker-LNG-LPG vessels.



**Nika-Polyester 12/24-Strand Ropes** are 100% made from High Tenacity Polyester fibers. Nika-Polyester ropes are known for their excellent strength and abrasion resistance properties. Nika-Polyester ropes are fit for applications requiring high breaking strength, excellent resistance against abrasion and shock absorption properties. Nika-Polyester ropes exhibit excellent resistance to UV sunlight, chemicals and cyclic loading. They maintain the same performance in wet and dry conditions. 12-24 Strand Nika-Polyester ropes are rotation resistant, user friendly and easy to splice. Nika-Polyester ropes are produced according to international standards such as DIN EN ISO 1141. They also comply with the latest regulations and recommendations for the safe mooring of tanker-LNG-LPG vessels.

**NIKA-Polyester ropes are constructed using the highest quality polyester fibers and offer excellent performance. These ropes are used as a standard for long-term deepwater mooring applications**



**NIKA-Double Braided 100% Polyester Ropes** are 100% Polyester ropes constructed by braiding a 32/64 strand sheath (or jacket) over a braided core. Their construction is fit for applications requiring high breaking load and low stretch properties. They have excellent resistance to abrasion wet/dry, cyclic loading, sunlight, chemicals and same performance wet/dry. They are produced according to international standards such as ISO 10547, MIL-R-24677, CI 1311, BS 7648. They are user friendly, rotation resistant and easy to splice. Their larger contact area reduces the fatigue on the rope when it spools and when passing through fairleads. Polyester fibers possess the best endurance among all the high tenacity fibers. These ropes comply to the latest regulations and recommendations of OCIMF for the safe mooring of the tanker-LNG-LPG vessels.

## TECHNICAL DATA

### POLYESTER 8STR/12STR

| Size   | Size | Weight | Single leg MBL | Grommet MBL |
|--------|------|--------|----------------|-------------|
|        |      |        |                |             |
| inches | mm   | Kg/m   | tons           | tons        |
| 9"     | 72   | 3,8    | 109            | 174         |
| 9 1/2" | 76   | 4,25   | 120            | 192         |
| 10"    | 80   | 4,70   | 135            | 216         |
| 11"    | 88   | 5,59   | 160            | 256         |
| 12"    | 96   | 6,75   | 195            | 312         |
| 13"    | 104  | 8,1    | 230            | 368         |
| 14"    | 112  | 9,4    | 260            | 416         |
| 15"    | 120  | 1,05   | 310            | 496         |
| 16"    | 128  | 1,45   | 335            | 536         |
| 18"    | 146  | 1,95   | 410            | 655         |
| 19"    | 154  | 2,05   | 450            | 720         |
| 20"    | 162  | 2,34   | 505            | 808         |

12-STRAND  
8-STRAND

### POLYESTER 32STR

| Size    | Size | Weight  |         | Minimum Breaking Load |
|---------|------|---------|---------|-----------------------|
|         |      | CIRC    | DIAM    |                       |
| inches  | mm   | Kg/100m | Kg/220m | tons                  |
| 4 1/2"  | 36   | 103     | 227     | 30,5                  |
| 5"      | 40   | 122     | 268     | 38                    |
| 5 1/2"  | 44   | 147     | 323     | 46                    |
| 6"      | 48   | 176     | 387     | 55                    |
| 6 1/2"  | 52   | 205     | 451     | 66                    |
| 7"      | 56   | 238     | 524     | 76                    |
| 7 1/2"  | 60   | 274     | 603     | 87                    |
| 8"      | 64   | 312     | 686     | 100                   |
| 8 1/2"  | 68   | 355     | 781     | 114                   |
| 9"      | 72   | 395     | 869     | 126                   |
| 9 1/2"  | 76   | 439     | 966     | 141                   |
| 10"     | 80   | 487     | 1.071   | 158                   |
| 10 1/2" | 84   | 538     | 1.184   | 174                   |
| 11"     | 88   | 591     | 1.300   | 189                   |
| 12"     | 96   | 702     | 1.544   | 226                   |

32-STRAND

**Specific gravity:** 1.38  
**Melting point:** 265 °C  
**Elongation at breaking:** 15-20%  
**Fiber water absorption:** 0-1%  
**Chemical resistance:** Very Good



# NIKA-Flex 12-strand, 8-strand

**NIKA-Flex ropes are user-friendly, non-rotational ropes intended for offshore applications. They exhibit very good strength-to-weight ratio and fatigue resistance.**



**Nika-Flex 8-Strand (4x2) Ropes** are mixed Polyolefin & Polyester ropes. High tenacity Polyester fibers cover NIKA-Steel® fibers through an engineered twisting process. The selected twist factor & fiber tensioning make the NIKA-Flex yarns stronger and more abrasion resistant than conventional mixed yarns. All of the strands are composed of mixed NIKA-Flex yarns and the resulting Polyester percentage is 50% - 50% w/w though the whole strand's cross-section. Nika-Flex ropes are ideal for demanding applications. The Ultra high abrasion resistance, the very high breaking strength and the excellent endurance to cyclic loading make up for the lack of buoyancy. Also, NIKA-Flex ropes exhibit excellent resistance to sunlight & chemicals. NIKA-Flex ropes are user friendly, rotation resistant and easy to splice. They comply with the latest regulations and recommendations of OCIMF for the safe mooring of tanker-LNG-LPG vessels.



**Nika-Flex 12/24-Strand Ropes** are mixed Polyolefin & Polyester ropes. High tenacity Polyester fibers cover Nika-Steel® fibers through an engineered twisting process. The selected twist factor & fiber tensioning make the Nika-Flex yarns stronger and more abrasion resistant than conventional mixed yarns. All of the strands are composed of mixed Nika-Flex yarns and the resulting Polyester percentage is 50% - 50% w/w though the whole strand's cross-section. Nika-Flex ropes are ideal for demanding applications. The Ultra high abrasion resistance, the very high breaking strength and the excellent endurance to cyclic loading make up for the lack of buoyancy. Also, Nika-Flex ropes exhibit excellent resistance to sunlight & chemicals. Nika-Flex ropes are user friendly, rotation resistant and easy to splice. They comply with the latest regulations and recommendations of OCIMF for the safe mooring of tanker-LNG-LPG vessels.

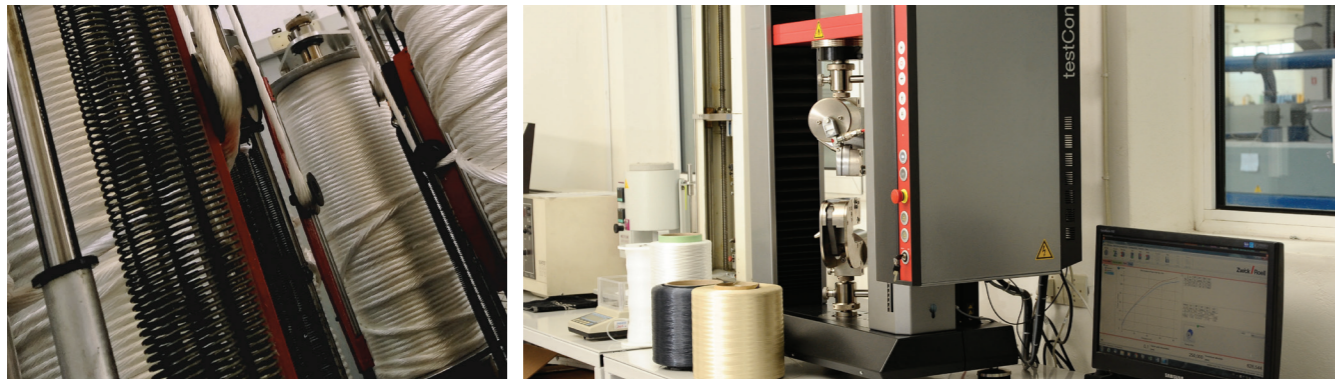
| TECHNICAL DATA      |      |        |                |             |
|---------------------|------|--------|----------------|-------------|
| NIKAFLEX 8STR/12STR |      |        |                |             |
| Size                | Size | Weight | Single leg MBL | Grommet MBL |
| CIRC                | DIAM | +/- 5% |                |             |
| inches              | mm   | Kg/m   | tons           | tons        |
| 9"                  | 72   | 3,31   | 128            | 205         |
| 9 1/2"              | 76   | 3,70   | 145            | 232         |
| 10"                 | 80   | 4,09   | 159            | 254         |
| 11"                 | 88   | 4,96   | 175            | 280         |
| 12"                 | 96   | 5,90   | 228            | 365         |
| 13"                 | 104  | 6,90   | 242            | 387         |
| 14"                 | 112  | 8,25   | 275            | 440         |
| 15"                 | 120  | 9,23   | 316            | 505         |
| 16"                 | 128  | 10,52  | 361            | 578         |
| 18"                 | 146  | 13,80  | 450            | 720         |
| 19"                 | 154  | 15,20  | 512            | 820         |
| 20"                 | 162  | 16,80  | 561            | 897         |

12-STRAND  
8-STRAND

**Specific gravity:** 1.14  
**Average Polyester w/w percentage:** 50%  
**Melting point:** 165 °C (NIKA-STEEL®) / 265°C (PES)  
**Elongation at breaking:** 15%-18%  
**Chemical resistance:** Very Good







## Pioneers in quality perfection

Established in 1936 in Piraeus, Greece, the Katradis Group of Companies is one of the most prominent organizations in the shipping industry.

Over the years, the Katradis Group has developed expertise in the design, development and manufacture of high quality synthetic mooring ropes, zinc and aluminum anodes. Our wide range of products includes ropes made with UHMWPE, Aramid, LCP (Liquid Crystal Polymer), Polypropylene, Nylon, Polyester and Mixed / Dual Fiber ropes, in single and double braided constructions.







### **Katradis Global Network**

**Africa:** Egypt (Alexandria, Port Said, Suez) | South Africa (Durban, Cape Town)

**Asia:** Singapore (Singapore) | South Korea (all ports) | China (Hong Kong, Shanghai, Qingdao, Zhenjiang & other ports)

**Europe:** Belgium (Antwerp, Zeebrugge) | Germany (Hamburg) | Netherlands (Rotterdam, Amsterdam) Spain (Algeciras, Cadiz, Las Palmas) | Turkey (all ports) | Bulgaria (Varna) | Greece (all ports) | Cyprus (all ports)

**Middle East:** U.A.E. (Fujairah, Dubai, Sharjah, Jebel Ali)

**North America:** Canada (Montreal) USA (Houston, New Orleans, New York, Los Angeles)

**Central America:** Panama (Panama)

**Australia:** (Brisbane, Sydney, Melbourne, Adelaide, Fremantle and Darwin)

*Worldwide strong relationships!*



KATRADIS GROUP OF COMPANIES

**HMPE, LCP, Aramid & Mixed Ropes for LNG/LPG/Tankers/Bulk Carriers & Offshore Applications - Steel Wire Ropes – Sacrificial Anodes, Anchors & Anchor Chains – Port Development & Vessel Deck Equipment**

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