

MOORING ROPES
CATALOGUE



WCI Marine Ropes is part of the holding companies under the World Clean International umbrella.

We are a Panamanian private-owned family company, managed by an expertise staff with more than 20 years of experience on the maritime field. World Clean International joined the maritime industry as a chemical factory in 2006 and has been expanding exponentially to the supplies and production of other line of technical products, thanks to the broad vision to improve, lead and innovate the maritime sector.

Under our WCI brand we produce a wide variety of fiber ropes for all sizes of vessels and mixed with different materials. Along with our technical experts in the shipping field, we gladly support our clients with the best solutions in all the key ports at America, Europe, Africa and Asia.

- All our ropes are mixed with strong fibers and high quality raw materials, such as high polypropylene, polyethylene, nylon, among many others. Also we provide the latest ANTI-SNAP Back arrestor technology for the safety of the seafarers on board.
- We are certified by ABS, Lloyds Register and MEG4 for all our ropes and we have a wide technical staff available to support all our clients worldwide.

¡Welcome on board!



















### ANTI-SNAP BACK ARRESTOR TECHNOLOGY

Our WCI Anti-Snap-Back arrestor ropes have an energy-absorbing core, which is in the middle of all our 12 strand fiber mixed ropes. With this new safety technology improvement, if the outer of the rope breaks due to overload, this core absorbs the snap-back forces. Consequently, this core transforms the act from a potentially deadly snap to a much safer slump, since the impact will be with a minimum force.



### STRIT INSPECTION

The testing equipment is complete and advanced, from the monofilament detection to the detection of the finished rope, to ensure the product quality. At present, the maximum tensile strength machine is 7000KN.





### **UHMWPE ROPES**

#### INTRODUCTION

Ultra-high-molecular-weight polyethylene (UHMWPE) is the strongest fiber rope in the world, higher strength than wire ropes of the same diameter, the weight is only 14% of the same MBL wire rope the coating and the heat-setting process improve drastically the structural stability and the strength efficiency of the rope while increasing the rope's coefficient of friction for better gripping performance when used in winches, capstans, chocks, bitts etc. there have two types for the UHMWPE, the II type is more wearable than I type, so II type service lift will be longer, operate more convenient, fast and safety.

#### **FEATURES**

- Material: UHMWPE Yarns with special coating
- Construction: 8 or 12strand
- Strongest fiber rope in the world
- 14% of the wire rope weight in case of the same MBL
- Excellent resistance to UV and chemicals
- No difference in tensile strength when wet or dry
- Easy to Splice
- Excellent abrasion resistance
- Melting Point:1500
- Elongation: 4%(When new)
- Specific gravity: 0.97(Floating)

#### **APPLICATIONS**

Mooring, Tow Lines, Anchor Line, Sling, Tug Rope, National Defense, Oil and other fields.





### SAMPLE CERTIFICATES





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 Report no.
 Project no.
 Report date:
 Office:

 21-38111-SG7
 4588459
 17 MAY 2021
 Singapore

### Report of Activity Verification of Product Testing Documentation

| General scope of activity:<br>Third Party Verification of Product Documentation   | Dates of all related activity:<br>17 May 2021   |
|---|---|
| Name and address of manufacturing/Test facility: WCI Maritime Services S.A. Address:Transistmic Way, Bethania San Antonio 80th St, Building WCI, Panama City, Panama. | Purchaser/Owner/Client:<br>For Stock  |
| Component description(s): PP&PET Mixed Rope Material type and grade: AA Grade Polypropylene & Polyester Mixed   | Results:  Meets requirements Subject to condition(s) noted Does not meet requirements |

This is to certify that the undersigned Technical representative of ABSG Consulting Inc. did at the request for above mentioned manufacturer and carry out the scope of services described below.

The scope of activity included the following:

1.1 Third Party Product Documentation Verification

| Product      | 12-Strand PP&PET Mixed Rope     |  |
|--------------|---------------------------------|--|
| Diameter     | 64mm                            |  |
| Length       | 220m                            |  |
| Material     | Polypropylene & Polyester Mixed |  |
| Construction | 12 strands                      |  |

#### 1.2 Issue Report of Activity

This Report is granted subject to the condition that it is understood and agreed that nothing herein contained shall be deemed to relieve any designer; tunufacturer, seller, supplier, repairer or operator of any warranty, express or implied and the liability of ABSG Consulting Inc. (hereinafter referred to as ABS Consulting and the liability of the acts or omissions of its employees, agents or subcontractors. Under no circumstances whatsoever shall ABS Consulting be liable for any injury or dambage to any ferson or property occurring by reason of negligent operation or any defect in materials, machinery, equipment or other items other than such defects ascertainable by normally accepted testing standards and only upon those items actually inspected by ABS Consulting and which are covered by this Report.

This certificate 'report is issued by ABS Consulting, and shall not be construed as a partial or complete fulfilment of requirement(s) specified in ABS Classification Rules' Guides' Notations

Form IS-2

TIV-PRO-00025Attachment B, TIV-ATT-00206 - Rev. 2



#### **WCI MARINE ROPES**

Certi No: DECWCI52-001

#### Mooring Line Certificate

Type Approval : LRSBUS2109893/3

Manufactured According to : OCIMF MEG4

Tested According to: ISO 2307 2019

| Client :     |  |
|--------------|--|
| PO NO :      |  |
| Vessel Name: |  |
| IMO No :     |  |

The mooring line has been manufactured, tested and documented following the ISO standard and the guidelines in appendix B of the Mooring Equipment Guidelines, 4 Edition, Issued by the OCIMF

| LINE Supply Information         |                   |              |                | +       |         |                             |      |   |
|---------------------------------|-------------------|--------------|----------------|---------|---------|-----------------------------|------|---|
| Ship Design MBL                 |                   |              |                | - /4.   | -74.5 T |                             |      |   |
| NSBF(if tested)                 |                   |              |                |         |         |                             |      |   |
| Diameter                        |                   |              |                | 64M     |         |                             |      |   |
| Length                          |                   |              |                | 220     | М       |                             |      |   |
| Jacketed                        |                   |              |                | NO      |         |                             |      |   |
| Splice type and design          |                   |              |                | 2.0n    | both    | end sl                      | eeve | eyes                                    |
| Material type and Grade         |                   |              |                | HT      | PP / I  | PES yarn                    | 1    | 110000000000000000000000000000000000000 |
| Manufacturer's part code and    | unique line       | identifier   |                | two     | blue tr | acer                        |      |   |
| Line design designation(product | name)             |              |                | WCI     | MIXE    | D ROPE                      |      |   |
| Line Construction               |                   |              |                | 12 9    | strand  |                             |      |   |
| Rotating                        |                   |              |                | No      |         |                             |      |   |
|                                 |                   |              |                |         |         |                             |      |   |
| Performance indicators          |                   |              | Alaman San San |         |         |                             |      | Harting Co.                             |
| Line Design Break Force(LDBF)   |                   |              |                | 78.2    |         |                             |      |   |
| Line linear Density(LLD)        |                   |              |                |         | kg/m    | Constitution of the same of |      | X                                       |
| Load Bearing Linear Density(LBL | D)                |              |                | 2.03    | kg/m    |                             |      |   |
|                                 |                   | Measured     |                |         |         | Maximu                      | m    |   |
| Line Tenacity(LT)               | 3                 | 8.32 T/kg/m  |                |         | 3       | 8.70 T/kg                   | /m   |   |
|                                 |                   | D/d Ratio: 5 | ( <del>)</del> |         | D       | /d Ratio:                   |      |   |
| Angle Break Force(ABF)          |                   | 91%          | ASTRONOMERON   |         |         | 98%                         |      | HOLDARISCO                              |
| Angle Endurance(AE)             |                   | 99%          |                |         |         | 100%                        | ij.  |   |
|                                 | -20⊠              | OM           | 20⊠            | 40      | DØ .    | 60⊠                         |      | 80⊠                                     |
| Temperature(T) % BF at 20 ₪     | 119%              | 106%         | 100%           | 92      | %       | 86%                         |      | 85%                                     |
| Axial Compression Resistance    |                   |              |                |         |         |                             |      |   |
|                                 | %LDBF:10          | %LDBF:20     | %LDI           | BF:30   | %LE     | DBF:40                      | %L   | DBF:50                                  |
| Average Immediate Strain(e)     | 2.8               | 4.7          | 6              | 5,8     |         | 8.5                         |      | 10.4                                    |
| Line description                | WCI MIXED Rope 12 |              |                | strand. | 64mr    | n. 220m                     | ntr  |   |

#### **ORIGINAL**

Signature of Authorised Inspector

Transistmic Way, Bethania San Antonio 80<sup>th</sup> street, Building WCI, PANAMA, www.wcimaritimeservice.com



### 8&12 STRAND UHMWPE ROPE PARAMETER TABLE

| Siz     | ze        | Weight |       | Breaking | g Strength |             |
|---------|-----------|--------|-------|----------|------------|-------------|
|         |           | J      | UHMWP | E Rope I | UHMWF      | PE Rope I I |
| Dia(mm) | Cir(inch) | Ktex   | KN    | Ton      | KN         | Ton         |
| 6       | 3/4       | 23     | 29.7  | 3.03     | 33         | 3.88        |
| 8       | 1         | 40     | 52.8  | 5.39     | 58.7       | 5.99        |
| 10      | 1-1/4     | 61     | 82.8  | 8.45     | 92         | 9.39        |
| 12      | 1-1/2     | 87     | 119   | 12.14    | 132        | 14.18       |
| 14      | 1-3/4     | 117    | 162   | 16.53    | 180        | 18.37       |
| 16      | 2         | 151    | 212   | 21.63    | 235        | 23.98       |
| 18      | 2-1/4     | 190    | 255   | 26.00    | 283        | 28.88       |
| 20      | 2-1/2     | 232    | 306   | 31.63    | 340        | 34.69       |
| 22      | 2-4/3     | 281    | 360   | 36.73    | 400        | 40.82       |
| 24      | 3         | 331    | 423   | 42.44    | 470        | 47.96       |
| 26      | 3-1/4     | 384    | 486   | 49.59    | 540        | 55.10       |
| 28      | 3-1/2     | 445    | 549   | 56.00    | 610        | 62.24       |
| 30      | 3-3/4     | 506    | 621   | 63.37    | 690        | 70.41       |
| 32      | 4         | 575    | 702   | 71.63    | 780        | 79.59       |
| 34      | 4-1/4     | 648    | 774   | 78.98    | 860        | 87.76       |
| 36      | 4-1/2     | 720    | 846   | 86.33    | 940        | 95.92       |
| 38      | 4-3/4     | 798    | 936   | 95.51    | 1040       | 106.12      |
| 40      | 5         | 881    | 1020  | 104.08   | 1130       | 115.30      |
| 44      | 5-1/2     | 1060   | 1180  | 120.40   | 1310       | 133.67      |
| 48      | 6         | 1250   | 1380  | 140.81   | 1530       | 156.12      |
| 52      | 6-1/2     | 1460   | 1590  | 162.24   | 1770       | 180.61      |
| 56      | 7         | 1690   | 1830  | 186.73   | 2030       | 207.14      |
| 60      | 7-1/2     | 1930   | 2050  | 209.18   | 2280       | 232.65      |
| 64      | 8         | 2200   | 2300  | 234.69   | 2560       | 261.22      |
| 68      | 8-1/2     | 2480   | 2560  | 261.22   | 2850       | 290.82      |
| 72      | 9         | 2780   | 2850  | 290.82   | 3170       | 323.47      |
| 76      | 9-1/2     | 3090   | 3150  | 321.43   | 3500       | 357.14      |
| 80      | 10        | 3430   | 3480  | 355.10   | 3870       | 394.89      |
| 88      | 11        | 4170   | 4210  | 429.59   | 4680       | 477.55      |
| 96      | 12        | 4970   | 5000  | 510.20   | 5560       | 567.35      |





#### **DOUBLE BRAIDED ROPE**

| Model   | Features   |  |  |
|---|--|--|--|
| NYLON DOUBLE BRAIDED ROPE                         | Material:Polyamide, Excellent abrasion resistance, Good resistance to UV and chemicals, Melting point: 215 ℃, Elongation at breaking: 25%-30%(When new), Specific gravity: 1.14  |  |  |
| POLYESTER DOUBLE BRAIDED ROPE                     | Material:Polyester, Excellent abrasion resistance,<br>Good resistance to UV and chemicals, Melting point: 260℃,<br>Elongation at breaking: 15%-21%(When new), Specific gravity: 1.38                                   |  |  |
| PP MULTIFILAMENT DOUBLE<br>BRAIDED ROPE           | Material:Polypropylene Multi, Excellent abrasion resistance,<br>Good resistance to UV and chemicals, Melting point: 165 ℃,<br>Elongation at breaking: 15%-18%(When new), Specific gravity: 0.91                        |  |  |
| POLYESTER&NYLON DOUBLE<br>BRAIDED ROPE            | Material:Inner Nylon Outer Polyester, Excellent abrasion resistance,<br>Good resistance to UV and chemicals, Melting point: 260 ℃ /165 ℃,<br>Elongation at breaking: 15%-21%(When new), Specific gravity: 1.19         |  |  |
| POLYESTER&PP MULTIFILAMENT<br>DOUBLE BRAIDED ROPE | Material:Inner Polypropylene Outer Polyester, Excellent abrasion resistance,<br>Good resistance to UV and chemicals, Melting point: 260 ℃ /165 ℃,<br>Elongation at breaking: 15%-18%(When new), Specific gravity: 0.99 |  |  |
| NYLON&PP MULTIFILAMENT<br>DOUBLE BRAIDED ROPE     | Material:Inner Polypropylene Outer Nylon, Excellent abrasion resistance, Good resistance to UV and chemicals, Melting point: 260 ℃/165 ℃, Elongation at breaking: 15%-21%(When new), Specific gravity: 0.98            |  |  |

#### INTRODUCTION

The double braided rope uses a fully automatic computerized operating procedure and consists of a 12-strand rope core and an outer layer of multi-strand rope. This unique weaving structure and excellent process technology can improve the overall performance of the rope by more than 15%, and it has many advantages such as low elongation, wear resistance, toughness and toughness, and simple operation, and it is deeply favored by users at the inside and outside country. It is currently the upgrading and replacement of 3 strand and 8 strand ropes. Products are mainly used in warships, ships, ocean shipping, offshore oil, mining





### **DOUBLE BRAIDED ROPE PARAMETER TABLE**

| Speci | fication | Ny   | ylon | Poly  | vester . | PPMulti | filament |       | ester/<br>/lon | Polye | ster/PP | Nylo | on/PP |
|-------|----------|------|------|-------|----------|---------|----------|-------|----------------|-------|---------|------|-------|
| Dia   | Cir      | Ktex | KN   | Ktex  | KN       | Ktex    | KN       | Ktex  | KN             | Ktex  | KN      | Ktex | KN    |
| 4     | 1/2      | 10.3 | 3.7  | 12.2  | 3.2      | 8,4     | 2.4      | 12.0  | 4.0            | 9.0   | 2.6     | 8.5  | 2.7   |
| 6     | 3/4      | 23   | 8.3  | 27.4  | 7.2      | 18.8    | 5.4      | 27    | 9.0            | 20.2  | 5.8     | 19   | 6.0   |
| 8     | 1        | 41   | 15   | 49    | 13       | 33      | 9.6      | 48    | 16             | 36    | 10      | 34   | 11    |
| 10    | 1-1/4    | 64   | 23   | 76    | 20       | 52      | 15       | 75    | 25             | 56    | 16      | 53   | 17    |
| 12    | 1-1/2    | 92   | 33   | 109   | 29       | 75      | 22       | 108   | 35             | 81    | 23      | 76   | 25    |
| 14    | 1-3/4    | 126  | 45   | 149   | 39       | 102     | 29       | 147   | 47             | 110   | 31      | 104  | 33    |
| 16    | 2        | 164  | 59   | 195   | 51       | 133     | 38       | 192   | 62             | 143   | 41      | 136  | 44    |
| 18    | 2-1/4    | 207  | 75   | 246   | 65       | 168     | 49       | 243   | 78             | 181   | 52      | 172  | 55    |
| 20    | 2-1/2    | 255  | 92   | 304   | 80       | 208     | 60       | 300   | 96             | 224   | 64      | 212  | 68    |
| 22    | 2-3/4    | 309  | 111  | 368   | 97       | 252     | 73       | 363   | 116            | 271   | 77      | 256  | 82    |
| 24    | 3        | 368  | 127  | 440   | 114      | 299     | 86       | 430   | 138            | 325   | 93      | 304  | 98    |
| 28    | 3-1/2    | 501  | 172  | 597   | 157      | 404     | 118      | 585   | 182            | 430   | 124     | 415  | 130   |
| 32    | 4        | 654  | 225  | 779   | 205      | 528     | 154      | 760   | 236            | 576   | 162     | 542  | 170   |
| 36    | 4-1/2    | 828  | 285  | 998   | 262      | 668     | 195      | 970   | 314            | 732   | 216     | 679  | 22    |
| 40    | 5        | 1018 | 352  | 1220  | 324      | 825     | 240      | 1180  | 385            | 902   | 266     | 838  | 280   |
| 44    | 5-1/2    | 1236 | 420  | 1470  | 378      | 1006    | 294      | 1440  | 462            | 1093  | 324     | 1030 | 34    |
| 48    | 6        | 1473 | 500  | 1760  | 450      | 1190    | 354      | 1710  | 546            | 1300  | 380     | 1230 | 400   |
| 52    | 6-1/2    | 1730 | 600  | 2050  | 535      | 1390    | 411      | 2010  | 635            | 1525  | 443     | 1440 | 466   |
| 56    | 7        | 2009 | 690  | 2380  | 621      | 1610    | 474      | 2330  | 731            | 1773  | 513     | 1670 | 540   |
| 60    | 7-1/2    | 2297 | 780  | 2740  | 712      | 1850    | 539      | 2670  | 834            | 2035  | 584     | 1910 | 61.   |
| 64    | 8        | 2616 | 900  | 3120  | 810      | 2090    | 613      | 3050  | 942            | 2310  | 665     | 2170 | 700   |
| 72    | 9        | 3306 | 1090 | 3950  | 980      | 2640    | 767      | 3860  | 1180           | 2924  | 846     | 2730 | 890   |
| 80    | 10       | 4089 | 1344 | 4870  | 1240     | 3290    | 934      | 4860  | 1442           | 3610  | 1036    | 3350 | 109   |
| 88    | 11       | 4954 | 1626 | 5910  | 1500     | 3950    | 1117     | 5780  | 1729           | 4371  | 1254    | 4060 | 132   |
| 96    | 12       | 5892 | 1950 | 7020  | 1750     | 4710    | 1304     | 6870  | 2033           | 5207  | 1501    | 4880 | 158   |
| 104   | 13       | 6911 | 2320 | 8250  | 2090     | 5480    | 1513     | 8070  | 2402           | 6112  | 1758    | 5800 | 185   |
| 112   | 14       | 8024 | 2670 | 9560  | 2400     | 6390    | 1694     | 9360  | 2730           | 7082  | 2043    | 6710 | 215   |
| 120   | 15       | 9198 | 3050 | 10970 | 2750     | 7350    | 2010     | 10740 | 3100           | 8127  | 2328    | 7690 | 245   |





### POLYPROPYLENE ROPE

#### INTRODUCTION

Polypropylene monofilament is the most conventional economical for the marine field, This light rope is strongest than a comparable manila rope, is non water absorbent, non slipping and provides good flexibility and high durability. and it has excellent resistance to most common chemicals. It is also resistant to rot, mildew and deterioration. It has UV resistance, good strength, and moderate stretch.

#### **FEATURES**

- Material: Polypropylene monofilament(PP)
- · Construction: 3 strand, 8 strand or 12 strand
- Good resistance to solvents and chemicals
- UV stabilized
- Melting point: 165⊠
- Elongation at breaking: 15% -18% (When new)
- Specific gravity: 0.91 (Floating)

#### **APPLICATIONS**

Mooring, Towing, Marine fishing, Marine Aquaculture, Cargo Lashing, signal ropes, Hoisting, rigging, General purpose use.

### 8&12 STRAND POLYPROPYLENE (PP) ROPE PARAMETER TABLE

|               | 1132750         |             | 250      |           |
|---------------|-----------------|-------------|----------|-----------|
| Si            | ze              | Weight      | Breaking | Strength  |
| Dia(mm)<br>直径 | Cir(inch)<br>圆周 | Ktex<br>线密度 | KN<br>干牛 | Ton<br>公吨 |
| 20            | 2-1/2           | 180         | 58       | 5.92      |
| 24            | 3               | 260         | 81       | 8.27      |
| 28            | 3-1/2           | 355         | 107      | 10.92     |
| 32            | 4               | 460         | 135      | 13.78     |
| 36            | 4-1/2           | 585         | 169      | 17.24     |
| 40            | 5               | 720         | 205      | 20.92     |
| 44            | 5-1/2           | 880         | 246      | 25.10     |
| 48            | 6               | 1040        | 286      | 29.18     |
| 52            | 6-1/2           | 1220        | 331      | 33.78     |
| 56            | 7               | 1420        | 378      | 38.57     |
| 60            | 7-1/2           | 1630        | 433      | 44.18     |
| 64            | 8               | 1850        | 490      | 50.00     |
| 72            | 9               | 2340        | 615      | 62.76     |
| 80            | 10              | 2900        | 756      | 77.14     |
| 88            | 11              | 3510        | 907      | 92.55     |
| 96            | 12              | 4170        | 1071     | 109.29    |
| 104           | 13              | 4900        | 1228     | 125.30    |
| 112           | 14              | 5700        | 1418     | 144.69    |
| 120           | 15              | 6500        | 1628     | 166.12    |
| 128           | 16              | 7400        | 1838     | 187.55    |
| 136           | 17              | 8400        | 2069     | 211.12    |
| 144           | 18              | 9400        | 2309     | 235.61    |
| 160           | 20              | 11521       | 2829     | 288.67    |
|               |                 |             |          |           |

## 3 STRAND POLYPROPYLENE (PP)

| Size    |           | Weight | Breaking Strength |       |  |
|---------|-----------|--------|-------------------|-------|--|
| Dia(mm) | Cir(inch) | Ktex   | KN                | Ton   |  |
| 4       | 1/2       | 6      | 2.1               | 0.2   |  |
| 6       | 3/4       | 17     | 5.9               | 0.60  |  |
| 8       | 1         | 30     | 10.4              | 1.06  |  |
| 10      | 1-1/4     | 45     | 15.3              | 1.56  |  |
| 12      | 1-1/2     | 65     | 21 7              | 2.2   |  |
| 14      | 1-3/4     | 90     | 29.9              | 3.05  |  |
| 16      | 2         | 115    | 37                | 78    |  |
| 18      | 2-1/4     | 148    | 47.2              | 4.82  |  |
| 20      | 2-1/      | 180    | 56.9              | 5.8   |  |
| 22      | 2- /4     | 220    | 68.2              | 6.96  |  |
| 24      | 3         | 260    | 7 7               | 13    |  |
| 26      | 3-1/4     | 305    | 92.2              | 9.4   |  |
| 28      | 3-1/2     | 355    | 105               | 1 7   |  |
| 30      | 3- /4     | 405    | 120               | 12.24 |  |
| 32      | 4         | 460    | 132               | 13.4  |  |
| 36      | 4-1/2     | 585    | 166               | 16.94 |  |
| 40      | 5         | 720    | 201               | 20.5  |  |



### **NYLON ROPES**



#### INTRODUCTION

Nylon rope also called polyamide rope, it is manufactured using superior grade, high-tenacity nylon fibers, has twice the strength of manila rope and it has high elongation (under load) when compared to other synthetic rope. Therefore it has good absorbing shock loads capacity. It is also excellent against rot and mildew, and is not damaged by oil and most chemicals. Nylon is very popular in marine rope applications, It is ideal for most applications including anchor and mooring lines.

#### **FEATURES**

- Specific gravity:1.14g/cm°
- · Melting Point: 2208
- Elongation at break:45% (8/12 strand), 30% (3 stand)
- Water absorption: 2-5%
- Double twisted construction (High tensile strength and good elasticity)
- Good abrasion resistance
- Good resistance to chemicals (Anti-corrosion)
- Excellent shock absorption

#### **APPLICATIONS**

Mooring rope, Anchored mooring rope, Tugboat rope, Beach rope, Fishery rope, tied work rope.

8&12 STRAND NYLON ROPE PARAMETER TABLE

| Size    |           | Size  |      | Weight       | Nylon Multif | ilament rope | Nylo | n rope |
|---------|-----------|-------|------|--------------|--------------|--------------|------|--------|
|         |           |       |      | Breaking Str | rengt        | -74          |      |        |
| Dia(mm) | Cir(inch) | Ktex  | KN   | Ton          | KN           | Ton          |      |        |
| 40      | 5         | 987   | 300  | 30.61        | 275          | 28.06        |      |        |
| 44      | 5-1/2     | 1190  | 358  | 36.53        | 328          | 33.52        |      |        |
| 48      | 6         | 1420  | 420  | 42.86        | 382          | 38.98        |      |        |
| 52      | 6-1/2     | 1670  | 489  | 49.90        | 451          | 46.02        |      |        |
| 56      | 7         | 1930  | 561  | 57.24        | 508          | 51.84        |      |        |
| 60      | 7-1/2     | 2220  | 640  | 65.31        | 588          | 60.00        |      |        |
| 64      | 8         | 2530  | 723  | 73.78        | 687          | 70.10        |      |        |
| 72      | 9         | 3200  | 905  | 92.35        | 834          | 85.00        |      |        |
| 80      | 10        | 3950  | 1102 | 112.45       | 1030         | 105.00       |      |        |
| 88      | 11        | 4780  | 1326 | 135.31       | 1211         | 123.57       |      |        |
| 96      | 12        | 5690  | 1561 | 159.29       | 1412         | 144.08       |      |        |
| 104     | 13        | 6670  | 1816 | 185.31       | 1667         | 170.00       |      |        |
| 112     | 14        | 7740  | 2091 | 213.37       | 1942         | 198.16       |      |        |
| 120     | 15        | 8880  | 2387 | 243.57       | 2167         | 221.12       |      |        |
| 128     | 16        | 10100 | 2703 | 275.82       | 2479         | 252.96       |      |        |
| 136     | 17        | 11400 | 3040 | 310.20       | 2791         | 284.80       |      |        |
| 144     | 18        | 12800 | 3386 | 345.51       | 3103         | 316.63       |      |        |
| 160     | 20        | 15800 | 4141 | 422.55       | 3827         | 390.51       |      |        |



### **POLYESTER ROPE**

#### INTRODUCTION

Our polyester rope is manufactured using premium grade polyester fibers, it is a continuous multifilament low-stretch yarn and twice twist. So it has the best UV resistance in all kinds of the chemical fiber and natural fiber rope, this results in a longer service life, yet remains flexible and easy to handle. Recommended for use in rigging, ship mooring, pelagic, sea farming and sail boats.

Standard color is white, length 200 meters or 220 meters per coil, additional lengths and colors available to special order.

#### **FEATURES**

- Specific Gravity: 1.38g/cm'
- Melting Point: 2650
- Elongation at break: 17-21% (3/12 strand), 25-28% (8 strand)
- Water absorption: 0-1%
- · Excellent abrasion resistance.
- · Good resistance to chemicals and corrosion.
- · Excellent durability.
- · Usable in low temperature.
- · Easy to splice

#### **APPLICATIONS**

Ship mooring, pelagic fishing, sea farming.

#### 3 STRAND POLYESTER ROPE PARAMETER TABLE

| Size    |           | Weight | Breaking Strength |       |  |
|---------|-----------|--------|-------------------|-------|--|
| Dia(mm) | Cir(inch) | Ktex   | KN                | Ton   |  |
| 4       | 1/2       | 12     | 2.9               | 0.30  |  |
| 6       | 3/4       | 27     | 5.6               | 0.57  |  |
| 8       | 1         | 48     | 10                | 1.02  |  |
| 10      | 1-1/4     | 76     | 15.6              | 1.59  |  |
| 12      | 1-1/2     | 110    | 22.3              | 2.28  |  |
| 14      | 1-3/4     | 148    | 31.2              | 3.18  |  |
| 16      | 2         | 195    | 39.8              | 4.06  |  |
| 18      | 2-1/4     | 245    | 49.8              | 5.08  |  |
| 20      | 2-1/2     | 303    | 62.3              | 6.36  |  |
| 22      | 2-3/4     | 367    | 74.7              | 7.62  |  |
| 24      | 3         | 437    | 89.6              | 9.14  |  |
| 26      | 3-1/4     | 512    | 105               | 10.71 |  |
| 28      | 3-1/2     | 594    | 120               | 12.24 |  |
| 30      | 3-3/4     | 682    | 134               | 13.67 |  |
| 32      | 4         | 778    | 154               | 15.71 |  |
| 36      | 4-1/2     | 982    | 190               | 19.39 |  |
| 40      | 5         | 1215   | 235               | 23.98 |  |

#### 8&12 STRAND POLYESTER ROPE PARAMETER TABLE

| Size    |           | Weight | Breaking Strength |        |  |
|---------|-----------|--------|-------------------|--------|--|
| Dia(mm) | Cir(inch) | Ktex   | KN                | Ton    |  |
| 40      | 5         | 1215   | 250               | 25.51  |  |
| 44      | 5-1/2     | 1468   | 295               | 30.10  |  |
| 48      | 6         | 1750   | 346               | 35.31  |  |
| 52      | 6-1/2     | 2050   | 405               | 41.33  |  |
| 56      | 7         | 2380   | 458               | 46.73  |  |
| 60      | 7-1/2     | 2730   | 512               | 52.24  |  |
| 64      | 8         | 3110   | 599               | 61.12  |  |
| 72      | 9         | 3930   | 738               | 75.31  |  |
| 80      | 10        | 4850   | 889               | 90.71  |  |
| 88      | 11        | 5870   | 1059              | 108.06 |  |
| 96      | 12        | 6990   | 1246              | 127.14 |  |
| 104     | 13        | 8200   | 1439              | 146.84 |  |
| 112     | 14        | 9500   | 1645              | 167.86 |  |
| 120     | 15        | 10900  | 1880              | 191.84 |  |
| 128     | 16        | 12400  | 2129              | 217.24 |  |
| 136     | 17        | 14000  | 2419              | 246.84 |  |
| 144     | 18        | 15700  | 2670              | 272.45 |  |
| 160     | 20        | 19400  | 3290              | 335.71 |  |



### **MIXED ROPE II**

#### INTRODUCTION

It is based on normal mixed rope specially development, Made of high tenacity polypropylene and polyester yarns, has retained its superior features, and can provide higher break demand. Has 8% improved breaking strength compares with normal polypropylene. This ideal composition and construction creates extremely low elongation which offers stability and safety when the rope is overloaded and makes the rope sustain its properties even after a long period under sea level, no loss of strength when wet.

#### **FEATURES**

- · Double twisted construction
- · Higher tensile strength than regular mixed
- Lower elongation
- · Well UV stabilized
- · Excellent repeated loading ability
- Superior abrasion resistance

| 8&12                          | Size |           | Weight | PP/PET M | ixed Rope I       | PP/PET M | ixed Rope II |
|-------------------------------|------|-----------|--------|----------|-------------------|----------|--------------|
| 8&12 STRAND PP/PET MIXED ROPE |      |           |        |          | Breaking Strength |          |              |
| ND P                          |      | Cir(inch) |        |          |                   |          |              |
| P/F                           | 40   | 5         | 776    | 262      | 26.73             | 305      | 31.12        |
| Ĕ                             | 44   | 5-1/2     | 939    | 314      | 32.04             | 364      | 37.14        |
| <u> </u>                      | 48   | 6         | 1110   | 371      | 37.86             | 428      | 43.67        |
| Ε                             | 52   | 6-1/2     | 1320   | 432      | 44.08             | 496      | 50.61        |
| D                             | 56   | 7         | 1520   | 499      | 50.92             | 570      | 58.16        |
| <u>0</u>                      | 60   | 7-1/2     | 1750   | 569      | 58.06             | 648      | 66.12        |
|                               | 64   | 8         | 1990   | 644      | 65.71             | 732      | 74.69        |
| PARAMETER TABLE               | 68   | 8-1/2     | 2255   | 725      | 73.98             | 821      | 83.78        |
| RA                            | 72   | 9         | 2520   | 805      | 82.14             | 915      | 93.37        |
| ≤E                            | 80   | 10        | 3110   | 982      | 100.20            | 1128     | 115.10       |
| Ħ                             | 88   | 11        | 3750   | 1183     | 120.71            | 1344     | 137.14       |
| 7.<br>T                       | 96   | 12        | 4470   | 1397     | 142.55            | 1589     | 162.14       |
| ABI                           | 104  | 13        | 5260   | 1622     | 165.51            |          |              |
| Е                             | 112  | 14        | 6050   | 1877     | 191.53            |          |              |
|                               | 120  | 15        | 6980   | 2142     | 218.57            |          |              |
|                               | 128  | 16        | 7950   | 2417     | 246.63            |          |              |
|                               | 136  | 17        | 8950   | 2713     | 276.84            |          |              |
|                               | 144  | 18        | 10100  | 3029     | 309.08            |          |              |
|                               | 160  | 20        | 12500  | 3703     | 377.86            |          |              |





#### **SUPERMIX ROPE**

| Siz     | ze        | Breaking Strength |       |  |
|---------|-----------|-------------------|-------|--|
| Dia(mm) | Cir(inch) | KN                | Т     |  |
| 16      | 2         | 55                | 5.61  |  |
| 20      | 2-1/2     | 83                | 8.49  |  |
| 28      | 3-1/2     | 156               | 15.95 |  |
| 32      | 4         | 202               | 20.61 |  |
| 40      | 5         | 326               | 33.27 |  |
| 48      | 6         | 464               | 47.35 |  |
| 56      | 7         | 619               | 63.16 |  |
| 64      | 8         | 805               | 82.14 |  |
| 72      | 9         | 1007              | 102.8 |  |
| 80      | 10        | 1263              | 128.9 |  |

#### INTRODUCTION

SUPERMIX each strand of fiber ropes are made with polyester fibers and polypropylene. Their mechanically balanced structure, protects the strand layers against abrasion while achieving high breaking strengths.

#### **FEATURES**

- Specific gravity: 1.00 cm' (Floating)
- Elongation at breaking: 18%-20%
- · Superior abrasion resistance



#### **DANLINEX ROPE**

#### **FIBER CONTENT**

High Tenacity DanLinex Fiber

#### **CHARACTERISTICS**

- . High Strength than Polypropylene
- · Floats
- .Superior ultraviolet resistance
- . Excellent flex wear resistance
- Non-Torque construction

#### **APPLICATIONS**

- Floating tow lines
- · Mooring and tie-uplines
- . Mooring pick-up lines

| Siz     | ze        | Breaking | Strength |
|---------|-----------|----------|----------|
| Dia(mm) | Cir(inch) | KN       | Ton      |
| 40      | 5         | 315.5    | 32.19    |
| 48      | 6         | 433      | 44.18    |
| 56      | 7         | 595      | 60.71    |
| 64      | 8         | 762      | 77.75    |
| 72      | 9         | 965      | 98.47    |
| 80      | 10        | 1211     | 123.57   |
| 96      | 12        | 1677     | 171.72   |
| 112     | 14        | 2293     | 233.98   |
| 120     | 15        | 2602     | 265.51   |
| 144     | 18        | 3662     | 373.67   |





#### **MOORING TAILS & SLEEVE**

#### REASON FOR USING MOORING TAILS

When using mooring ropes, there is a general desirability for the additional elasticity provided by mooring tails. Tails can provide this elasticity which reduces the load induced by wire moorings under dynamic loading. In the face of various winds, waves and current conditions, the tail allows the ship to respond more favourably. The tail also tends to distribute the load more evenly Compared to mooring lines without tails.

#### MOORING TAILS INTRODUCTION

The rope tails is made of polyester and polypropylene composite or nylon yarns. As the strength is higher than that of nylon, a smaller diameter of rope can be used, providing better handling. The standard effective working length is 11 mtr, with 2.0 mtr soft eyes one end and 1.0 mtr soft eye the other end.

The vertex and splice area are urethane coated or canvas cover for added wear protection. And if you have diffrence request, please specify sizes and length, we can customized.

#### **SLEEVE INTRODUCTION**

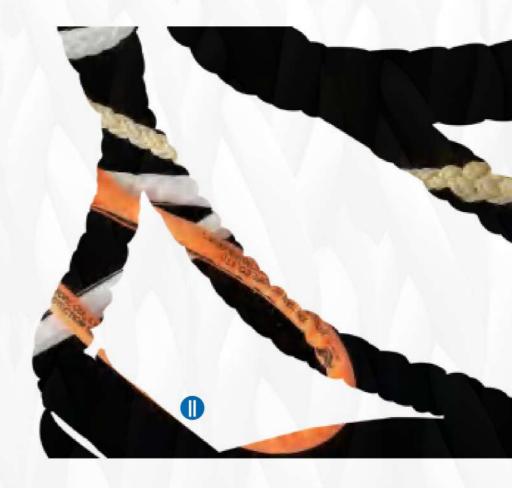
Rope Jacket as method of protection could be applied to mooring ropes. Rope Jacket will prevent mooring rope abrasion and the life time of ropes will be longer with Perfection.

#### ROPE JACKET I

(Dia. 40mm-160mm)
Without handle

#### **ROPE JACKET II**

(Dia. 40mm-160mm)
With handle in each end





### 8/12 Strand PP&polyester Mixed Tail

| Specification |           |           | Weight     | Breaking Strength |        |
|---------------|-----------|-----------|------------|-------------------|--------|
| Dia(mm)       | Length(M) | Cir(inch) | Weight(KG) | KN                | Ton    |
| 64            | 11        | 8"        | 36         | 741               | 75.61  |
| 68            | 11        | 8-1/2"    | 41         | 833               | 85.00  |
| 72            | 11        | 9"        | 45.5       | 926               | 94.49  |
| 80            | 11        | 10"       | 56         | 1129              | 115.20 |
| 88            | 11        | 11"       | 67.5       | 1361              | 138.88 |
| 96            | 11        | 12"       | 80.5       | 1607              | 164.00 |
| 104           | 11        | 13"       | 95         | 1865              | 190.31 |
| 112           | 11        | 14"       | 109        | 2159              | 220.31 |
| 120           | 11        | 15"       | 126        | 2464              | 251.43 |

### 8/12 Strand Nylon Tail

| Specification |           | Weight    | Breaking Strength |      |        |
|---------------|-----------|-----------|-------------------|------|--------|
| Dia(mm)       | Length(M) | Cir(inch) | Weight(KG)        | KN   | Ton    |
| 64            | 11        | 8"        | 46.5              | 790  | 80.61  |
| 68            | 11        | 8-1/2"    | 51                | 857  | 87.45  |
| 72            | 11        | 9"        | 58.5              | 959  | 97.86  |
| 80            | 11        | 10"       | 70                | 1185 | 120.92 |
| 88            | 11        | 11"       | 86                | 1422 | 145.10 |
| 96            | 11        | 12"       | 102.5             | 1680 | 171.43 |
| 104           | 11        | 13"       | 118               | 1917 | 195.61 |
| 112           | 11        | 14"       | 139               | 2233 | 227.86 |
| 120           | 11        | 15"       | 157               | 2492 | 254.29 |

### **Double Braided Nylon Tail**

| Specification |           | Weight    | Breaking Strength |      |        |
|---------------|-----------|-----------|-------------------|------|--------|
| Dia(mm)       | Length(M) | Cir(inch) | Weight(KG)        | KN   | Ton    |
| 64            | 11        | 8"        | 47.1              | 1035 | 105.61 |
| 68            | 11        | 8-1/2"    | 53.3              | 1144 | 116.73 |
| 72            | 11        | 9"        | 59.5              | 1254 | 127.96 |
| 80            | 11        | 10"       | 73.6              | 1546 | 157.76 |
| 88            | 11        | 11"       | 89.2              | 1870 | 190.82 |
| 96            | 11        | 12"       | 106.1             | 2243 | 228.88 |
| 104           | 11        | 13"       | 124.4             | 2668 | 272.24 |
| 112           | 11        | 14"       | 144.4             | 3071 | 313.37 |
| 120           | 11        | 15"       | 165.6             | 3508 | 357.96 |

#### **GANGWAY SAFETY NET**

Commonly used materials are polyamide (nylon), polyester, polypropylene or polypropylene multifilament etc., used on both sides of the boarding gangway or below, high-altitude channels and other places that need protection, isolation and cabin coverage. Can be customized according to the customer's specific requirements.

| Material       | Nylon, Polyester, Polypropylene, PP Multifilament |
|----------------|---|
| Size           | 4x6m 5x10m 4x16m 5x20m as per your request        |
| Mesh Size      | 100*100mm、150*150mm                               |
| Advantages     | Soft,convenient to operate                        |
| Weaving Ways   | Hand-made   |
| Rim Rope Size  | 6mm、as per your request                           |
| Mesh Rope Size | 4mm、as per your request                           |
| Color          | White, as per your request                        |





NO KNOT SAFETY NET

**KNOT SAFETY NET** 

#### **CARGO NET**

Cargo net is a kind of net woven with polypropylene rope, which can be used to lift goods. Polypropylene cargo net can be used for lifting and transporting goods in flexible packaging and can play a protective role. Generally, the mesh is relatively large, and it can lift some heavy goods or irregular goods. The hoisting net is generally used for non-standard workpiece lifting, especially for products with special shapes and special materials.

| Material       | PP                           |
|----------------|------------------------------|
| Size           | 2x2m 2.5x2.5m 3x3m 4x4m 5x5m |
| Mesh Size      | 200*200mm                    |
| Rim Rope Size  | 24mm、as per your request     |
| Mesh Rope Size | 18mm、as per your request     |
| Color          | White / blue / Customized    |
| Package        | Woven bag                    |



#### **TIGER ROPE**

Tiger rope is a low cost, low weight (floating), UV resistant, and a high quality tensile synthetic rope. Tiger rope is manufactured from extruded copolymer fibers, whose properties result in tiger ropes that size for size are almost triple the strength of traditional manila natural fiber ropes, and almost 50% stronger than conventional tape polypropylene ropes. These tiger ropes have a very good abrasion resistance and are manufactured in various colours, and to different specifications depending on their particular use and customer requirements.

#### **TECHNICAL SPECIFICATION**

- · Good resistance to solvents and chemicals
- UV stabilized
- \* Specific gravity: 0.91

| Winch   | Winch line        |      | Breaking | Strength |
|---------|-------------------|------|----------|----------|
| Dia(mm) | Dia(mm) Cir(inch) |      | KN       | KGF      |
| ~ ~ / ~ | /4                | 17.5 | 3.92     | 0.40     |
| 8       | 1                 | 32   | 7.85     | 0.80     |
| 10      | 1-1/4             | 50   | 10.8     | 1.10     |
| 12      | 1-1/2             | 74   | 14.8     | 1.51     |
| 14      | 1-3/4             | 99   | 19.8     | 2.02     |
| 16      | 2                 | 125  | 25.0     | 2.55     |
| 18      | 2-1/4             | 160  | 32.0     | 3.27     |
| 20      | 2-1/2             | 200  | 40.0     | 4.08     |
| 22      | 2-3/4             | 240  | 48.0     | 4.90     |
| 24      | 3                 | 290  | 58.0     | 5.92     |

#### **WINCH LINE**

Winch Line is made from a special 100% Ultra High Molecular Weight Polyethylene (UHMW-PE). It's has low elongation, low weight, high strength, good ageing resistance, this product is instead of wire rope. All of our winch line include a length 10' protective sleeve; stainless steel thimble and safety hook with connector link.

| Winch line |           | Weight  | Breaking Strength |     |
|------------|-----------|---------|-------------------|-----|
| Dia(mm)    | Cir(inch) | Ktex(G) | KN                | KGF |
|            | /         | 1       | 1                 |     |
|            | 1         |         | 7                 |     |
| 1          | 1-1/      |         | 1                 |     |
| 1          | 1-1/      |         | 1                 | 1   |
| 1          | 1- /      | 11      | 177               | 1 1 |
| 1          |           | 1       | 7                 | 11  |
| 1          | -1/       | 1       |                   |     |
|            | -1/       | 7       |                   |     |

#### **VINYLON ROPE**

| Winch lin | ne        | Weight               | Breaking Strength |
|-----------|-----------|----------------------|-------------------|
| Dia(mm)   | Cir(inch) | Meter Weight<br>(Kg) | KN                |
| 8         | 1         | 0.036                | 6.86              |
| 9         | 1-1/8     | 0.048                | 8.83              |
| 10        | 1-1/4     | 0.058                | 11.80             |
| 12        | 1-1/2     | 0.078                | 14.70             |
| 14        | 1-3/4     | 0.108                | 21.60             |
| 16        | 2         | 0.145                | 25.50             |
| 18        | 2-1/4     | 0.180                | 32.40             |
| 20        | 2-1/2     | 0.238                | 37.30             |
| 22        | 2-3/4     | 0.290                | 47.1              |
| 24        | 3         | 0.345                | 54.90             |
| 26        | 3-1/4     | 0.399                | 62.80             |
| 28        | 3-1/2     | 0.467                | 72.60             |
| 30        | 3-3/4     | 0.533                | 80.40             |
| 32        | 4         | 0.611                | 93.20             |

Made from a compound of vinylon chloride and vinylidene from lime stone, spun into cotton like soft thread and stranded into rope, vinylon rope is flexible and easy-to-use. Has excellent weather-resistance and durability. Although its strength is 40% weaker than 3-strand nylon rope, this rope has a good supple texture, is friction resistant, does not twist easily and easy to handle rope.

#### **FEATURES**

- High tensile strength and good elasticity
- · Good abrasion resistance
- Good resistance to chemicals and corrosion
- Excellent shock absorption



#### **OTHERS ITEMS**

#### HELICOPTER PLATFORM NON-SLIP NET

Helicopter platform non-slip net, also called aircraft landing net, anti-skid net: Material is generally used Manila rope, sisal rope, nylon rope and other materials. The size of the net is generally 6M×6M, 10Mx10M, 12x12M, 15MX1 5M.

The size of the mesh is 20CMx20CM, which just fits the wheels of the aircraft and prevents the aircraft from being blown by the wind.





**MARINE BALL** 



**CLIMBING ROPE** 



**BUOYANT LIFE ROPE** 



**MANILA ROPE** 



**DOCK LINE** 



**COTTON ROPE** 



**HEAVING LINE** 



**MAN ROPE** 



**ROPE LADDER** 



# OUR GLOBAL SUPPLY PRESENCE



### AMERICA AND THE CARIBBEAN

- † USA (Houston and New Orleans)
- † Panama
- **†** Colombia
- † Chile

#### ASIA

- Singapore
- **†**China
- **TUAE**
- \*Korea

#### **EUROPE**

- **†**Spain
- **†**The Netherlands

#### **AFRICA**

Cape Town















