Survitec Group is a leading supplier of mooring ropes to the commercial marine industry with an enviable reputation for quality, technical support and product innovation.

We supply the ropes used by tankers and cargo vessels, cruise ships and ferries, tug and salvage operators, offshore oil and gas contractors, naval ships and port authorities. Our products conform to international classification regulations.

Our wide range of mooring ropes includes both general polypropylene, polyester and nylon ropes as well as the next generation of high-strength ropes manufactured from Ultra High Molecular Weight Polyethylene (UHMWPE) fibres. These technologically advanced ropes offer superior strength to traditional steel wire moorings.

We also manufacture a fibre rope Emergency Towing System that utilises the exceptional strength of Dyneema® HMPE fibres. The system, which conforms to the latest IMO resolution MSC.35 (63), is fully type-approved by Lloyds Register of Shipping and Det Norske Veritas.

Survitec Group has the resources that few of our competitors can match, we supply, inspect, test and maintain everything from marine safety products and lifting gear through to fire fighting, power tools and height safety systems.

Through our European-wide branch network and global service and distribution centres we are able to deliver our rope products quickly and efficiently to the major shipping ports of the world. We can also provide a wide range of rigging services including splicing and mooring system assembly together with associated products.

With our wealth of experience and knowledge, we are uniquely placed to provide excellent technical support, including guidance on the best product for a specific application. When it comes to the design, development and engineering of bespoke rope products, rest assured that our dedicated rope team has worked at the cutting edge of mooring technology for many years.

Whatever the requirement, our commitment is to provide customers with a quality solution that meets individual needs.
SURVITEC NUTECH®

3, 4 & 8 STRAND

Made from high tenacity mixed polyolefin yarns and available in 3, 4, 8, 12 and 24 strand. A competitive alternative to Nylon and Staple Polypropylene.

Benefits & Features

• Specific gravity of 0.91, i.e. permanent flotation in water
• Excellent abrasion resistance
• Excellent strength
• Flexible, easy to handle and splice in use
• Fully UV stabilised with medium to low elongation in use
• Protected spliced eyes at each end
• Tremendous range of uses
• Wet strength equal to dry strength
• OCIMF (MEG3) compliant

Applications

• Mooring
• General Marine Applications
• Messenger lines

SURVITEC NUTECH®

12 & 24 STRAND

Additional Benefits & Features

• Flakes down easily and neatly
• Ideal for auto winches and drums
• Non-rotating, torque-free round construction

Constructed principally from high tenacity Polypropylene with outer yarns alternating with Polyester for increased abrasion resistance. Nutech®-Plus is an 8 strand plaited rope with a melting point of 165°C. A variety of colours is available on request. Also available in 12 x 2 construction upon request.

Additional Benefits & Features

• Specific gravity 0.99, i.e. permanent flotation in water
• Excellent resistance to frictional heat damage
• Does not absorb water
• Excellent chemical resistance except in the presence of alkalis
• OCIMF (MEG3) compliant

<table>
<thead>
<tr>
<th>Size</th>
<th>Diameter</th>
<th>Weight</th>
<th>Breaking Load</th>
<th>Breaking Load</th>
</tr>
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<td>5½</td>
<td>6</td>
<td>6½</td>
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<td>10</td>
<td>11</td>
<td>11½</td>
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<td>12½</td>
</tr>
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</table>

MOORING ROPES
**SURVITEC NUFLEx**

Material: High tenacity Polypropylene & Polyester composite fibres.

**Benefits & Features**

- Wet strength equal to dry strength
- High strength: weight ratio for ease of handling
- Excellent abrasion resistance against internal and external friction
- Exceptional resistance to frictional heat damage
- Manufactured in accordance with OCIMF guidelines
- TCLL value of 73%. TCLL is the Actual Breaking Load of a wet rope after 1000 cyclic loadings. This is expressed as a percentage of the original wet breaking strength
- Excellent shock load absorption, yielding low snapback at break
- Specific gravity 1.1, i.e. neutrally buoyant
- Remains flexible and easy to splice in use
- Does not absorb water
- Fully UV stabilised
- Excellent chemical resistance, except in the presence of alkalis

**Applications**

- Towing stretchers
- Mooring Lines
- Mooring Tails
- Single Point Moorings

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**SURVITEC MEGAFLEX**

Plaited ropes are well established in marine and offshore applications, because of their ease of handling and non-rotating behaviour. Megaflex is a composite fibre made from high tenacity polypropylene with polyester as a strength member.

It has excellent fatigue characteristics and abrasion resistance. The fatigue life is comparable to pure polyester, but the weight for a given strength is comparable to that of nylon. The rope has a very high breaking strength and is not influenced by water so dry strength is equal to wet strength. It is an ideal rope for mooring tails. Available in 8 strand construction.

Material composition: 50% Polyester / 50% High Tenacity Polypropylene

**Benefits & Features**

- Optimum strength: weight ratio for ease of handling
- Wet strength equal to dry strength
- Good abrasion resistance against internal and external friction
- Manufactured in accordance with OCIMF guidelines
- Good resistance to frictional heat damage
- Good shock load absorption, yielding low snapback at break
- Specific gravity 1.14
- Remains flexible and easy to splice in use
- Does not absorb water
- Fully UV stabilised
- Excellent chemical resistance, except in the presence of alkalis

**Applications**

- General Fishing
- Inland Shipping
- Merchant Navy
- Mooring Lines
- Mooring Tails

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**Size** | **Weight** | **Breaking Load**
---|---|---
100M Coil | Kilos | Tonnes |
4" | 36 | 132.0 | 24.8 | 243 |
5 | 40 | 192.5 | 34.2 | 336 |
5 1/4 | 44 | 238.8 | 41.9 | 430 |
6 | 48 | 284.0 | 47.4 | 485 |
6 1/2 | 52 | 310.2 | 55.5 | 545 |
7 | 56 | 345.4 | 63.2 | 620 |
7 1/4 | 60 | 402.6 | 72.4 | 710 |
8 | 64 | 453.2 | 81.6 | 801 |
9 | 72 | 507.6 | 93.2 | 901 |
9 1/4 | 76 | 632.6 | 112.0 | 1001 |
10 | 80 | 701.8 | 125.0 | 1124 |
11 | 88 | 830.0 | 146.0 | 1466 |
12 | 96 | 983.4 | 174.0 | 1711 |
13 | 104 | 1146.4 | 204.0 | 2000 |

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**Size** | **Weight** | **Breaking Load**
---|---|---
100M Coil | Kilos | Tonnes |
4 | 32 | 30.6 | 300 |
5 1/4 | 36 | 35.2 | 345 |
6 | 40 | 42.5 | 417 |
7 1/4 | 44 | 49.1 | 482 |
8 | 48 | 55.7 | 546 |
9 | 52 | 64.2 | 630 |
10 | 56 | 72.7 | 713 |
11 | 60 | 81.1 | 796 |
12 | 64 | 90.3 | 886 |
13 | 68 | 104.0 | 1025 |
14 | 72 | 113.0 | 1107 |
15 | 76 | 134.0 | 1315 |
16 | 80 | 148.0 | 1448 |
17 | 84 | 175.0 | 1713 |
18 | 88 | 205.0 | 2014 |
19 | 92 | 235.0 | 2308 |
20 | 96 | 265.0 | 2603 |
21 | 100 | 295.0 | 2908 |
22 | 104 | 325.0 | 3208 |

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**Size** | **Breaking Load** | **Weight**
---|---|---
100M Coil | Tr | kN | kg/100m | kg/coil |
4 | 32 | 30.6 | 300 | 68.5 | 151 |
5 1/4 | 36 | 35.2 | 345 | 73.5 | 175 |
6 | 40 | 42.5 | 417 | 96.6 | 213 |
7 1/4 | 44 | 49.1 | 482 | 112.0 | 247 |
8 | 48 | 55.7 | 546 | 125.0 | 282 |
9 | 52 | 64.2 | 630 | 140.0 | 327 |
10 | 56 | 72.7 | 713 | 158.0 | 372 |
11 | 60 | 81.1 | 796 | 180.0 | 417 |
12 | 64 | 90.3 | 886 | 211.0 | 465 |
13 | 68 | 104.0 | 1025 | 245.0 | 542 |
14 | 72 | 113.0 | 1107 | 287.0 | 587 |
15 | 76 | 134.0 | 1315 | 315.0 | 652 |
16 | 80 | 148.0 | 1448 | 348.0 | 785 |
17 | 84 | 175.0 | 1713 | 415.0 | 913 |
18 | 88 | 205.0 | 2014 | 469.0 | 1076 |
19 | 92 | 235.0 | 2308 | 563.0 | 1238 |
20 | 96 | 265.0 | 2603 | 686.0 | 1438 |
21 | 100 | 295.0 | 2908 | 856.0 | 1688 |
22 | 104 | 325.0 | 3208 | 1083.0 | 2058 |
SURVITEC ATLAS®
& WINCHTECH

A 100% high tenacity, low elongation Nylon (mono and multifilament), 6 strand cross-laid white rope with a specific gravity of 1.14 and a melting point of 215°C. Robust construction maintaining shape under extreme tension. Easier to handle than wire and easy to splice.

Benefits & Features
- Excellent abrasion resistance
- Excellent UV resistance
- Workable in sub-zero temperatures
- Good chemical resistance, except in the presence of acids
- Resistant to rotting, corrosion and seawater
- Can be stowed wet without any special maintenance
- Very high breaking strength

Applications
- Very easy to use on mooring winches
- Mooring Lines
- Anchor ropes and other heavy duty cables

SURVITEC NUTECH®
WINCHLINE

A floating winch line with a 12 strand core made from co-polymer fibre. The over-braided cover material is generally made from Nutech® yarns, although this can be supplied in pure nylon or polyester.

Benefits & Features
- High Strength
- Specific Gravity 0.97 i.e. permanent flotation in water
- Excellent UV Resistance
- Melting point: 185°C
- Good abrasion resistance
- Very easy to use on tension winches
- Maintains shape under extreme tension

Applications
- Anchor line
- Mooring
- Winch line
- Heavy duty applications

MOORING ROPES
SPECIFICATIONS TO SUIT A VARIETY OF APPLICATIONS AND INDIVIDUAL REQUIREMENTS
**SURVITEC 12 STRAND DYNEEMA® UHMWPE SK75 (OVERBRAIDING OPTIONAL)**

Constructed from Ultra High Molecular Weight Polyethylene (UHMPE – Dyneema® SK75) core with a protective cover of composite yarn.

**Material composition**
Ultra High Modulus Polyethylene (UHMPE) – Dyneema® (SK75).

**Benefits & Features**
- **UHMPE** – ultra high molecular weight polyethylene rope
- Strongest tensile strength per weight
- Stronger than same diameter wire rope
- **Heat & UV resistant**
- **Low coefficient of friction**
- **Reduced operational costs**
- Safer to handle than wire rope
- **Melting point:** 150°C
- **Specific gravity:** 0.97 (floats)
- **Elongation at break:** 4-5%
- **Water absorption:** Zero
- **UV resistance:** Good
- **Abrasion & chemical resistance:** Excellent
- **Wet strength** is equal to dry strength

**Applications**
- **Mooring Lines** (to be used with tails)
- **Lifting Nets and Slings**
- **Anchor Lines**
- **Pipe pull lines**
- **Oceanographic cables**
- **Pick up lines/messenger lines**
- **Seismic lines**
- **Industrial fishing**
- **Fish farms**

**Heavy Duty Eye Protection**
We can supply spliced eyes with heavy duty protection
- **Unique method of protection for Dyneema® rope**
- **Ensures optimum service life**
- **Heavy duty sliding wear sleeves are optional**
- **Polyurethane coating also available**
- **Springs are recommended for mooring applications**

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**STEEL WIRE ROPES**

Standard Galvanised Steel Wire Ropes for mooring and towing applications. These ropes are available in ‘fibre core’ construction, however the steel core provides additional strength, stability against crushing or deformation on drums, pulleys etc.

<table>
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<th>Minimum Breaking Load kN</th>
<th>Minimum Breaking Force kN</th>
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<td>148.0</td>
<td>1450.0</td>
<td>164.0</td>
<td>1610.0</td>
</tr>
</tbody>
</table>

**Benefits & Features**
- **Lightly greased for improved corrosion resistance**
- **Manufactured in accordance with ISO Standards**
- **Full rigging, splicing service available**
- **Full range of compacted and non-rotating wires available**

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**MOORING TAILS**

Survitec can also supply nylon and composite fibre mooring tails in order to provide elasticity in a mooring system. This helps to reduce damage to wire and Dyneema® ropes by absorbing shock loads.

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**ALL OF THE ABOVE COMPLY WITH OCIMF (MEG3) GUIDELINES. SYNTHETIC TAILS SHOULD HAVE AN MBL OF AT LEAST 25% HIGHER THAN THAT OF THE MOORING LINE TO WHICH THEY ARE ATTACHED. POLYAMIDE TAILS SHOULD HAVE A 37% HIGHER MBL THAN THE MOORING LINE, TO TAKE ACCOUNT OF LOSS OF STRENGTH WHEN WET.**

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**MOORING ROPES**

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Installation, operation and storage of Dyneema ropes

Our new generation of high performance synthetic fibre ropes offers superior performance to traditional steel wire mooring ropes. These ropes are manufactured from Ultra High Modulus Polyethylene (UHMPE) Dyneema® (SK75) material. This material is significantly less elastic than conventional fibre ropes but more elastic than steel wire. This means the lines can absorb higher dynamic loads making them a better option during ship-to-ship transfer operations or at terminals subject to waves or swell.

Benefits of Dyneema

• Strong as steel wire but lighter and easier to handle
• Longer lasting than steel wire
• Dyneema does not rust
• No lubrication required so no water pollution from grease
• Reduced maintenance and operational costs
• Safer for crew to use
• Quicker mooring operations

Not surprisingly, many tanker operators have equipped their ships with UHMPE ropes in preference to conventional steel wire mooring ropes. Tanker operators benefit from significant advantages from using these UHMPE ropes in terms of safety and operational efficiency. All our high performance mooring ropes comply with OCIMF First Edition 2002 ‘Guidelines on the use of High-Modulus Synthetic Fibre Ropes as Mooring Lines on Large Tankers’.

Our Dyneema® ropes are available in three different constructions. Overbraided, 8-strand and 12-strand. Details on our Overbraided Dyneema® rope are shown opposite. For more information on our 8-strand and 12-strand Dyneema® ropes please contact us at rope@survitecgroup.com

Rope Service Life

Correct installation procedures and preparation of deck gear are very important to ensure a maximum service life of all synthetic fibre ropes. Contact us for a list of recommendations that will help a crew realise the full potential service life of these ropes or visit our website at www.survitecgroup.com.

Installation and operation on winches

Dyneema® ropes can be used successfully on winches. Contact us for a list of recommendations that we have collated from direct experience and feedback from ship operators that will ensure smooth operation. Email rope@survitecgroup.com or visit www.survitecgroup.com.

Use of Ropes around Sheaves

Dyneema® ropes have very good bending fatigue performance characteristics when compared to other ropes, including wire. To maintain a high strength efficiency use a round shaped sheave with a large diameter. Ideally the ratio of sheave diameter to rope diameter should be greater than 12:1. Do not use ‘V’ shaped grooves on sheaves.
SURVITEC EMERGENCY TOWING SYSTEM

Under IMO regulation V/15-1 of the 1994 SOLAS Convention, as amended by resolution MSC.31(63) in 1994, all new and existing tankers of 20,000 tonnes deadweight and above must be fitted with an emergency towing arrangement.

Survitec manufactures a fibre rope Emergency Towing System using Dyneema® HMPE fibre ropes, in accordance with the latest IMO resolution MSC.35 (63) and fully type-approved by Lloyds Register of Shipping and Det Norske Veritas as well as being recognised to comply with other Class requirements.

Survitec emergency towing system Assurance Pack is available in two different specifications.

Pack 1
Pack 1 is designed for vessels with a deadweight of between 20,000 and 50,000 tonnes and provides a working strength of 1,000 k.N.

Pack 2
Pack 2 is for tankers over 50,000 tonnes requiring towing components with a working strength of 2,000 k.N.

Both packs are modular and comprise of a marker buoy with a top light, a messenger line, towing pennant, chain, towing bracket and stern-mounted storage unit. The chafing chain is connected via a quick release coupling to the towing bracket which is secured to the vessel deck. This chain, which is housed in the base of the container system, is connected to a towing pennant which in turn is connected to a messenger line and a marker buoy. These items are stowed in the upper level of the container.

In use, the towing system is easily deployed within 15 minutes without ship’s power. First the storage unit cover is lifted off or, for single person deployment, a removable side section is released. The buoy is then removed and passed through the fairlead. This releases the messenger line. The towing vessel retrieves the buoy and winches in the messenger line to connect the towing pennant which flows freely from its stowage position.

Benefits & Features

- High strength, low weight floating Dyneema® towing pennant
- Modular system is easy to transport, install, service and replenish
- Low cost installation and maintenance with flexible component assembly
- Location is determined by the available deck area and not the needs of the system
- One system design for adaptability within tanker fleets
- Shape of cover prevents use of system as a storage or work area
- Cover can include corporate colours, logos and company imagery

WE ALSO SUPPLY AND MANUFACTURE A RANGE OF ADDITIONAL MARINE PRODUCTS:

- Lifeboat Fall Preventer Devices
- Pilot Ladders
- Personnel Transfer Baskets
- Jacobs Ladders
- Embarkation Ladders
- Helideck Nets & Perimeter Nets
- Gangway Safety Nets

Please contact us for further information.