

## COMMERCIAL MARINE Synthetic Fiber Ropes

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Using these products can entail risks. Do not use them for any other than the intended purposes. Especially, do not use them for personal protection or lifting purposes as specified in EU Directive 2006/42/ EC, unless the products are clearly identified as suitable for such purposes under relevant standards. Customers shall make sure that persons using the products are familiar with their correct use and the necessary safety precautions. Keep in mind that any of these products can cause damage if incorrectly used, stored, cleaned, or overloaded. Check national safety regulations, industry recommendations, and standards for locally applicable requirements (e.g. choice of safety factors).

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Please note: All rope breaking strengths are based on spliced rope testing per CI-1500 unless otherwise specified.

# EXPERTISE FROM 225 YEARS OF EXPERIENCE

What started back in 1790 with simple hemp ropes has since evolved into a globally successful group of enterprises specializing in the development and production of fiber and steel wire ropes, strapping, and composites.

## Vast diversity

Its products are designed for a wide variety of applications ranging from cranes and marine applications to packaging and through to the automotive sector. It is the continuity and stability of a family business that makes us the reliable partner who supports you, competently and effectively, in coping with your daily challenges.



## Global presence ensures customer proximity

Manufacturing operations in various countries allow us to meet local quality and certification standards as well as customer requirements without difficulty. From our sites in Austria, the Czech Republic, the U.S., Sweden, and Thailand, and backed by a close-knit global network of distribution partners, we continue to satisfy the expectations of our customers.



## Innovative solutions through synergies

TEUFELBERGER is a leading specialist for fiber and steel wire ropes, strapping, and fiber composite components. The spectrum of technologies in TEUFELBERGER's portfolio generates various synergies between the extrusion of thermoplastics, braiding of high performance fibers, and processing of wires into ropes, strapping, and lightweight composite components. Especially fiber and steel wire products brought about valuable synergies with regard to both application and manufacturing technologies, which have benefited our customers tremendously. This makes TEUFELBERGER your ideal partner right from the project planning phase.

5% of TEUFELBERGER's employees are active in research and development and make sure that our customers have access to the latest, innovative rope technologies. 10% of the entire investment volume are committed to development and quality assurance.

# AN UNSURPASSED TRADITION OF QUALITY AND RELIABILITY

For applications that range from the most simplistic to those that require the greatest levels of precision and complexity, TEUFELBERGER fiber ropes all maintain their exceptional level of quality and reliability.

As a global leader in an ever-changing world, we strive to be at the forefront of innovation and adopt emerging technologies into all parts of our business. However, as we continue to grow and innovate we always maintain our unyielding commitment to quality and reliability.

For over two hundred and twenty five years, TEUFELBERGER has successfully provided quality products for a multitude of applications to our many customers across the globe. The breadth and depth of our fiber rope product line is the largest and most extensive in the cordage industry and our expertise on a product application level is unsurpassed.

At every stage of the rope making process: from the analysis of new and existing fiber types to utilizing state-of-the-art manufacturing equipment, to maintaining our unyielding commitment to quality control, TEUFELBERGER leads the industry; carefully adapting its processes when necessary to create the highest quality products and provide exceptional levels of service to our customers.

From the smallest boats to the largest ships, TEUFELBERGER products are on thousands of vessels worldwide. Our extensive product line and product knowledge brings a depth of understanding at the forefront of the industry. This understanding results in not only great products but also complete support to our customers.

As the global epicenter of the Commercial Marine Division of TEUFELBERGER, our plant in Fall River, MA produces large diameter lines for fleets of tugs, barges, and towboats, as well as lines for the US navy and US Coast Guard. Our global resources provide the opportunity for increased collaboration in all of our departments including engineering, manufacturing, sales, marketing, and purchasing in order to create the highest quality, most innovative products, at the best possible value for our customers.

## FIBER STRUCTURES

### Monofilaments

The yarns consist of one single element of a relatively large diameter and are braided into a rope.

#### **Characteristics:**

- ✓ Very good abrasion resistance
- Low dirt take-up
- ✓ Stiff structure

#### Textured fibers

A certain degree of disorder is caused in a formerly straight bundle of synthetic fibers to generate characteristics which are usually seen only on natural fibers.

RAW MATERIALS

#### Characteristics:

- 🗸 Good grip
- High elasticity
- Traditional look and feel

### Multifilaments

A bundle of thin fibers processed into twines which then are braided into a rope. The majority of fiber ropes follow this basic design.

#### Characteristics:

- High flexibility
- ✓ High tensile strength

#### Staple fiber

This type of material consists of spun pieces of short filaments instead of a bundle of long ones.

#### Characteristics:

- ✓ Excellent grip
- Soft handling

## HMPE (High Modulus Polyethylene)

HMPE is an extremely high strength fiber composed of ultra high molecular polyethylene. For the same weight it has 15 times the tensile strength of steel. Rope made from this type of fiber shows very low elongation and tensile strength. If very high loads are being applied for a long period of time, HMPE fiber tends to creep. The rope then is irreversibly extending its length. At the same time, these robust fibers show excellent performance in terms of abrasion resistance and good UV-resistance.

#### Aramid

Aramid fibers have an extremely high breaking load and show almost no stretch. They do not creep. They are somewhat sensitive to UV-rays, bending over sharp edges, and abrasion. It is mainly used in places where high temperature resistance is essential, for example on winches, in hot air balloon ropes, or for any other application where heat exposure needs to be considered.

#### Liquid Crystal Polymer (LCP)

LCP (known as Vectran<sup>®</sup>, a brand name of Hoechst Celanese), combines extremely low elongation with extremely high breaking loads. However, its UV-resistance is not very high. It is heat resistant and not very sensitive to bending over sharp edges. The big advantage of Vectran<sup>®</sup> is, however, that compared to HMPE it does not creep.

#### Polyester

Static ropes made of polyester fibers are characterized by good breaking loads and low stretch. This material offers both chemical and physical advantages such as UV resistance salt water resistance, and good abrasion strength in both dry and wet conditions. However, the dynamic energy absorption capacity is much lower than that of nylon ropes and therefore only to a limited extent suitable for types of use involving high impact forces.

#### Nylon

Nylon has a high breaking load as well as high elongation. Preferably, it is used in products that are required to absorb shock loads. The abrasion resistance of nylon is better in wet conditions than in dry conditions because it tends to take up water (up to 7%). Another disadvantage compared to polyester is the lower resistance to UV-radiation in sunlight.

#### Polypropylene (PP)

Due to its limited technical characteristics, polypropylene is only used for simple applications. PP is very light and even buoyant in water. Its abrasion resistance and temperature resistance are lower than those of most other fibers.





## Technical properties of available raw materials

Common Reference Name	High Modulus Polyethylene (HMPE)	Aramid	Liquid Crystal Polymer (LCP)	Polyester	Nylon	Polypropylene (PP)
Trade Names / Typical Marketing Terms	Dyneema® Spectra® HMPE UWHMPE	Technora®/ Twaron®/ Kevlar® Para-Aramid	Vectran®	Polyester Dacron®	Nylon Polyamide	Polypropylene PP Polypro
Strength (daN/mm²)	345	300	300	110	81	52
Specific weight (g/cm³)	0.97	1.40	1.41	1.40	1.14	0.91
Water intake (%)	0	2	<0.1	<0.5	4 - 6	0
UV-resistance	good	limited	limited	excellent	average	good
Elongation (%)	3.5	3.5	3.5	10 - 16	20 - 25	18 – 22
Abrasion resistance (dry)	very good	limited	very good	good	very good	sufficient
Abrasion resistance (wet)	very good	limited	very good	very good	good	good
Creep	creeps at high loads	excellent / almost not measurable	excellent / not measur- able	excellent / almost not measurable	low	creeps at high loads
Melting temp. (°C)	140	charred at 500	330	260	230	165

## ENDURA 12

Endura 12 is very high strength, low stretch, and has ultra low creep. It utilizes the latest ultra high molecular weight polyethylene fiber in a 12-strand construction. This high tech fiber and construction provides an extremely high strength, light weight rope that is non-rotational and easily spliced. Endura 12 is ideally suited for wire rope replacement applications where size, strength, and stretch are the main design considerations.

All Dyneema<sup>®</sup> fiber ropes come with TEUFELBERGER's proprietary abrasion resistant coating that is specially formulated to yield higher strength and more durable and water-resistant lines.



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### Applications

- Replacement for steel cable
- Tug boat tow lines
- Face and wing wires
- Winch lines
- Tug pendant and main line

### Helicopter long lines

- Underground pulling lines
- Slings
- Trawl line
- Wire rope replacement

### Features

- ✓ Excellent abrasion resistance
- Easy to inspect
- ✓ Maximum strength to weight ratio

✓ Floats

✓ UV stable

- ✓ Extremely low stretch
- ✓ Easy to splice

Ø Diame	ter	Circumference	Weight		Breaking Streng	th	
mm	inch	inch	g/m	lbs./100'	Minimum Ibs.	Average lbs.	
6	1/4	3/4	25.30	1.70	7,950	9,700	
8	5/16	1	34.20	2.55	13,300	14,500	
10	3/8	1 1/8	50.60	3.40	16,800	18,800	
11	7/16	1 1/4	59.50	4.20	22,200	24,000	
12	1/2	1 1/2	87.80	6.15	32,100	34,300	
14	9/16	1 3/4	102.70	7.20	39,500	42,000	
16	5/8	2	135.40	10.10	50,800	58,000	
18	3/4	2 1/4	219.30	14.74	58,000	67,000	
22	7/8	2 3/4	272.30	18.80	85,000	97,500	
24	1	3	348.10	23.40	98,100	114,000	
28	1 1/8	3 1/2	461.20	31.00	133,000	148,000	
30	1 1/4	3 3/4	544.50	36.60	149,000	171,000	
33	1 5/16	4	602.60	40.50	166,000	190,000	
34	1 3/8	4 1/8	675.50	45.40	185,000	212,000	
36	1 1/2	4 1/2	726.00	48.80	205,000	228,000	
40	1 5/8	5	958.10	64.40	255,000	283,000	
42	1 3/4	5 1/2	1041.50	70.00	302,000	335,000	
48	2	6	1223.00	82.20	343,000	381,000	
56	2 1/4	7	1703.50	114.50	483,000	537,000	
60	2 1/2	7 1/2	1913.30	128.60	529,000	588,000	
64	2 5/8	8	2282.30	153.40	596,000	675,000	
72	3	9	2816.40	189.30	749,000	856,000	

## Strong. Light. Durable.

Endura 12 is extremely high strength, lightweight, durable, and can be used in place of wire in virtually any commercial marine application. And now, Endura 12 is available in a red and blue two-color option for easier twist identification.



# HYPERTEN

Hyperten lines are made using STS-Stronger Than Steel<sup>®</sup> technology which is our patented process of adding heat and applying tension which aligns the rope fibers resulting in higher rope strength. As a result, Hyperten lines have a higher breaking strength, weigh less, have lower levels of stretch, and have a more stable cross-section than its non-heat set counterparts. This allows for smaller diameter lines to address applications typically requiring



### Available Colors



### Applications

- Replacement for steel cable
- Winch lines
- Excellent for any hoisting or pulling application

### Features

- $\checkmark$  Highest strength to weight ratio
- Excellent Abrasion Resistance
- $\checkmark$  Lowest stretch and elongation available
- ✓ Easily spliced
- 🖌 Floats

Ø Diamete	r	Circumference	Weight		Breaking Streng	jth	
mm	inch	inch	g/m	lbs./100'	Minimum Ibs.	Average lbs.	
3	1/8	3/8	8.90	0.60	4,700	5,200	
5	3/16	9/16	19.30	1.30	9,000	9,475	
6	1/4	3/4	25.30	1.70	11,200	12,385	
7	9/32	7/8	37.20	2.50	15,700	18,700	
8	5/16	1	49.10	3.30	20,200	23,600	
9	23/64	17/16	58.80	3.95	19,700	23,600	
10	3/8	1 1/8	64.00	4.30	25,100	26,585	
11	7/16	1 1/4	75.90	5.10	30,300	31,530	
12	1/2	1 1/2	101.20	6.80	38,200	43,675	
14	9/16	1 3/4	138.40	9.30	50,190	55,770	
16	5/8	2	163.70	11.00	59,355	65,950	
18	3/4	21/4	193.40	13.00	77,715	86,350	
20	13/16	21/2	263.30	17.70	93,285	103,650	
22	7/8	23/4	281.20	18.90	101,500	112,790	
24	1	3	346.70	23.30	117,810	130,900	

## T-12

T-12 is a 12-strand single braid that is comprised of 100% Technora<sup>®</sup> and is characterized by very high tensile strength, very low stretch, zero creep, and excellent resistance to heat. T-12 comes standard with a black urethane coating.



## Available Colors

### SX

### Applications

- Lifting sling / utility
- Mooring stopper
- Safety lifeline

### Technical Data

### Features

- ✓ Very high strength
- ✓ Very low stretch
- $\checkmark$  Very high melting point
- ✓ Spliceable

Ø Diameter	inch	Circumference inch	Weight g/m	lbs./100'	Breaking Strength Minimum Ibs.	Average lbs.	]
	1/	2/	0.00	0.50	1 770	0.000	
3	1/8	%8	8.80	0.59	I,//U	2,800	
5	3/16	9/16	17.70	1.19	3,900	5,300	
6	1/4	3/4	31.20	2.10	7,400	8,600	
8	3/16	1	46.10	3.10	10,800	12,000	
10	3/8	1 1/8	64.00	4.30	14,550	16,200	
11	7/16	1 1/4	99.70	6.70	25,200	28,000	
12	1/2	1 1/2	119.00	8.00	30,250	33,600	
16	5/8	2	148.80	10.00	43,900	48,800	
18	3/4	21/4	287.10	19.30	54,000	60,100	

## DA-PRO

Dapro has a 12-strand construction with each strand utilizing lightweight polyolefin fiber sheathed in high tenacity polyester fibers. This unique construction produces a strong, lightweight rope that is firm/round, torque-free, and has excellent abrasion and snag resistance. Dapro is ideally suited for lifting and handline applications.



### Available Colors



### Applications

- Hand lines
- Lifting lines
- Pulling lines
- Messanger line

### Features

- ✓ Easy to splice
- ✔ Abrasion resistant
- 🖌 Good grip
- ✔ Good knot-holding capabilities
- ✔ Hockle resistant

Ø Diameter	inch	Circumference inch	Weight g/m	lbs./100'	Breaking Strength Minimum Ibs.	Average lbs.	
6	1/4	3/4	25.30	1.70	2,000	2,500	
8	5/16	1	37.20	2.50	3,300	4,150	
10	3/8	1 1/8	46.10	3.10	4,000	5,060	
11	7/16	1 1/4	64.00	4.30	5,400	6,350	
12	1/2	1 1/2	87.80	5.90	6,000	8,300	
14	9/16	1 3/4	111.60	7.50	9,000	10,400	
16	5/8	2	133.90	9.00	9,800	12,080	
18	3/4	21/4	181.90	12.20	14,000	16,500	
22	7/8	23/4	260.40	17.50	15,660	17,400	
24	1	3	364.50	24.50	17,500	19,425	
28	1 1/8	31/2	504.40	33.90	19,440	21,600	

# MEGA BRAID

Mega Braid has a unique 12-strand single braid construction that offers the perfect combination of good looks, superb handling characteristics, excellent strength and controlled elongation. Mega Braid is flexible, easy to handle, resists kinking, and is easy to coil or flake. Mega Braid has less rotation, is lighter and is easier to handle than double braids of the same diameter.



### Available Colors



### Applications

- Mooring lines
- Towing lines
- Mooring tails
- Working lines
- Lifting slings

## Features

- ✓ Easy to splice
- ✓ Excellent shock/energy absorption
- Good abrasion resistance

### Technical Data

Ø Diameter	inch	Circumference inch	Weight g/m	lbs./100'	Breaking Strength Minimum Ibs.	Average lbs.
16	5/8	2	147.30	9.90	7,900	10,300
18	3/4	21/4	208.30	14.00	12,200	13,400
22	7/8	23/4	255.90	17.20	19,000	21,100
25	1	3	383.90	25.80	21,300	24,900
28	1 1/8	31/2	505.90	34.00	28,000	34,900
30	1 1/4	3¾	535.60	36.00	34,000	41,000
36	1 1/2	41/2	825.70	55.50	41,000	48,000
41	1 5/8	5	892.70	60.00	46,750	55,000
44	1 3/4	51/2	992.40	66.70	51,850	61,000

\* The technical data above reflects white rope specifications only. Colored rope specifications may differ and are available upon request.

# MEGA BRAID II

Mega Braid II is an abrasion resitant 12-strand nylon line. Each of its strands are individually braided resulting in an extremely firm yet flexible rope that resists picking and chafing. This line offers excellent abrasion resistance, is ideal for docking usage, and is easy to flake or coil.



### Available Colors



### Applications

- General working line
- Dock line
- Trawl or bridle line

#### Features

- ✓ Superior abrasion resistance
- ✓ Easy to splice
- ✔ Good shock mitigation

### Technical Data

Ø Diameter	inch	Circumference inch	Weight g/m	lbs./100'	Breaking Strength Minimum Ibs.	Average lbs.
12	1/2	1 1/2	92.20	6.20	5,800	6,500
14	%/16	1 3/4	108.60	7.30	7,500	8,500
16	5/8	2	145.80	9.80	9,000	10,000

\* The technical data above reflects white rope specifications only. Colored rope specifications may differ and are available upon request.

## ENDURA BRAID

Endura Braid is a line that provides optimal performance, strength, and durability. Featuring a specially engineered 12-strand Dyneema® coated core with a braided polyester cover, it protects against UV deterioration and wear. Endura Braid has good knot-tying ability and is very low stretch.



### Available Colors



### Applications

- Winch lines
- Towing lines
- Lifting lines
- Wire rope replacement

### Technical Data

Features

- ✓ Lightweight
- ✓ Excellent strength to weight ratio
- ✓ Very low elastic elongation

Ø Diameter		Circumference	Weight		Breaking Streng	th	
mm	inch	inch	g/m	lbs./100'	Minimum Ibs.	Average lbs.	]
16	5/8	2	175.60	11.80	27,000	29,000	
18	3/4	21/4	235.10	15.80	34,000	40,000	
22	7/8	23/4	311.00	20.90	48,500	53,900	
24	1	3	403.20	27.10	58,000	70,000	
28	1 1/8	31/2	511.80	34.40	81,000	96,000	
30	1 1/4	33⁄4	626.50	39.44	85,000	100,000	
36	1 1/2	41/2	834.70	54.10	149,000	171,000	
48	2	6	1406.20	92.50	255,000	283,000	
60	21/2	7 1/2	2199.30	143.40	343,000	381,000	
72	3	9	3237.90	213.60	529,000	588,000	

## STA-SET

Sta-Set is a low-stretch durable double braid line ideal for all applications requiring control, positioning, lifting, or lowering lines. Sta-Set has approximately 50% less stretch than the same construction in nylon.



### Available Colors



### Applications

<ul> <li>Lifting lines</li> </ul>
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- Hand lines
- Winch lines
  - ines General purpose working line

- Pulling lines

### Features

- ✔ Durable
- ✓ Torque-free construction
- $\boldsymbol{\checkmark}$  Low stretch and elastic elongation
- 🖌 Heat resistant

### Technical Data

Ø Diameter		Circumference	Weight		Breaking Streng	jth	
mm	inch	inch	g/m	lbs./100'	Minimum Ibs.	Average lbs.	
12	1/2	1 1/2	116.00	7.80	8,850	10,100	
14	9/16	1 3/4	150.30	10.10	9,500	11,700	
16	5/8	2	177.00	11.90	13,000	16,900	
18	3/4	21/4	252.90	17.00	22,000	23,500	
22	7/8	2 3/4	352.60	23.70	26,600	33,800	
24	1	3	482.00	32.40	33,400	40,900	
28	1 1/8	31/2	592.10	39.80	37,500	45,000	
31	1 1/4	33/4	732.00	49.20	38,100	54,750	
38	1 1/2	41/2	937.30	63.00	62,000	72,000	
41	1 5/8	5	1264.60	85.00	92,000	103,000	
50	2	6	1859.80	125.00	132,000	146,700	
66	25/8	8	3213.60	216.00	220,000	244,600	

\* The technical data above reflects white rope specifications only. Colored rope specifications may differ and are available upon request.

## NYLON DOUBLE BRAID

Nylon Double Braid has the most elastic double braid construction available. It has excellent energy absorption properties and minimal strength loss due to UV exposure. It conforms to military specification Mil-R-24050 B&C and with twice as much stretch as polyester, Nylon Double Braid is great for docking and mooring lines because of it's ability to absorb energy.



### Available Colors



### Applications

Anchor lines

- Dock lines
  - Mooring tailsPendant lines
    - Shock lines
- Hand linesPulling lines
- Slings

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### Features

- ✓ Excellent shock/energy absorption
- ✔ Durable
- ✓ Marine finish available

### Technical Data

Ø Diameter		Circumference	Weight		Breaking Strengt	h	
mm	inch	inch	g/m	lbs./100'	Minimum Ibs.	Average lbs.	
12	1/2	1 1/2	104.10	7.00	7,500	8,000	
14	9/16	1 3/4	136.90	9.20	10,500	12,300	
16	5/8	2	148.80	10.00	11,000	13,100	
18	3/4	21/4	223.20	15.00	18,900	20,500	
22	7/8	2 3/4	287.10	19.30	22,000	24,750	
24	1	3	367.50	24.70	29,200	32,750	
28	1 1/8	31/2	513.30	34.50	35,000	43,700	
30	1 1/4	33/4	610.00	41.00	54,000	60,250	
33	1 5/16	4	684.40	46.00	66,800	74,250	
38	1 1/2	41/2	828.70	55.70	70,000	77,550	
41	1 5/8	5	1032.50	69.40	80,000	90,000	
44	1 3/4	51/2	1202.10	80.80	96,150	102,000	
51	2	6	1495.20	100.50	117,000	131,000	
57	21/4	7	1978.80	133.00	150,000	166,600	
63	21/2	71/2	2231.70	150.00	164,600	183,000	
66	25/8	8	2395.40	161.00	176,400	196,000	
70	2 7/8	9	3035.10	204.00	185,100	205,750	
76	3	9	3392.20	228.00	225,000	261,000	
83	31/4	10	4165.80	280.00	271,400	301,600	

\* The technical data above reflects white rope specifications only. Colored rope specifications may differ and are available upon request.

# MESSENGER LINE

Messenger Line is a brightly colored, durable, and spliceable tow line that floats on the surface of the water for improved visibility. This double braided nylon over polypropylene rope is torque-free and non-hockling. It's braided design is easily spliceable and easy to handle. It retains strength when wet or dry.



### Available Colors



### Applications

Features

- Messenger line
- Rescue throw line

✓ Floats✓ Lightweight

Ø Diameter		Circumference	Weight		Breaking Streng	th	
mm	inch	inch	g/m	lbs./100'	Minimum Ibs.	Average lbs.	
9	3/8	1	62.00	4.10	1,700	2,900	
11	7/16	1 1/4	78.90	5.30	3,700	5,050	

## POLYESTER 3-STRAND

Polyester 3-Strand is a traditional low-stretch continuous filament 3-strand polyester rope. It has excellent abrasion resistance with low stretch. It is high strength and it is easy to splice.



### Available Colors



### Applications

- General purpose
- Rigging line

### Features

- ✓ Excellent abrasion resistance
- ✓ Stays firm under load
- ✓ Durable
- ✓ Economical

Ø Diameter	inch	Circumference inch	Weight g/m	lbs./100'	Breaking Streng Minimum Ibs.	th Average lbs.	]
12	1/2	1 1/2	117.50	7.90	6,500	7,500	
16	5/8	13/4	172.60	11.60	8,900	11,600	
18	3/4	21/4	236.60	15.90	11,500	14,650	
22	7/8	23/4	339.20	22.80	17,300	18,500	
24	1	3	441.90	29.70	21,000	25,450	

## PREMIUM NYLON

Premium Nylon is manufactured from premium grade high tenacity nylon fiber that is treated with a proprietary marine finish to improve fiber-to-fiber abrasion resistance. Premium Nylon is long wearing, easy to handle, and has excellent abrasion resistance.



### Available Colors



### Applications

- Anchor lines
- Dock lines
- General purpose

### Features

- 🗸 Durable
- ✓ Excellent shock mitigation
- ✔ High elasticity
- ✓ Superior energy absorption

Ø Diameter	inch	Circumference inch	Weight g/m	lbs./100'	Breaking Strength Minimum Ibs.	Average lbs.
16	5/8	2	142.80	9.60	9,450	11,650
18	3/4	21/4	203.80	13.70	14,700	17,150
22	7/8	23/4	278.20	18.70	18,300	22,300
24	1	3	361.50	24.30	19,500	27,700
28	1 1/8	31/2	462.70	31.10	34,500	35,800

# MULTILINE II

Multiline II is a 3-strand composite line of which is comprised of three different fibers: polyolefin, filament polyester, and spun polyester. This unique combination of fibers creates a line that is lightweight, high strength, and has excellent grip and handling. The rope's excellent grip, handling, and knotability capabilities remain in tact even when the rope is wet.



### Available Colors



### Applications

- Hand lines
- Hoisting ropes
- Safety lines

### Features

- ✓ High strength to weight ratio
- ✓ Excellent abrasion resistance
- ✓ Excellent knot holding ability
- ✓ Balance construction
- ✓ Low stretch
- ✓ Easy to handle
- ✔ Maintains flexibility

Ø Diameter	inch	Circumference	Weight	lba (100'	Breaking Streng	th	
	ILICIT		9/11	105./100	i wiii iii iii iii iii iii iii iii iii	Average lbs.	I
8	5/16	1	39.60	2.70	1,860	2,060	
10	3/8	1 1/8	62.50	4.20	2,900	3,500	
11	7/16	1 1⁄4	69.90	4.70	4,000	4,300	
12	1/2	1 1/2	99.70	6.70	5,100	6,700	
16	5/8	2	154.70	10.40	8,500	9,800	
18	3/4	21/4	215.70	14.50	10,100	13,300	
22	7/8	23/4	266.30	17.90	13,000	15,200	
24	1	3	313.90	21.10	15,500	19,100	

# KM-III

KM-III is an exceptional static rope that features a balanced construction consisting of a continuous filament polyester cover braided over a unidirectional nylon core. KM-III is designed to meet the rigorous requirements associated with rescue and work at height operations. KM-III is dual certified (CE & NFPA) for life safety.



### Available Colors



Ar	ilac	cat	ions
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- Life safety
- Confined space rescue
- Static rapelling
- Work at height

- Features
- Abrasion resistant
- ✓ Maintains shape with use
- ✓ Superior shock mitigation
- ✓ Excellent knotability

### Specifications

Standard: EN 1891 B (8.0mm, 9.5mm) EN 1891 A (10mm, 10.5mm, 11mm, 13mm) NFPA 1983:2012 (8.0mm, 9.5mm, 11.0mm, 13.0mm. 14.5mm)

Ø Diameter	inch	Circumference inch	Weight g/m	lbs./100'	Breaking Strength Minimum Ibs.
11	7/16	1 1/4	86.30	5.80	7,900
12	1/2	1 1/2	117.50	7.90	10,350
16	5/8	2	151.80	10.20	11,465

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