LINE SELECTION GUIDE
2019
So many different ropes — need a little help choosing?
Samson offers a large variety of ropes specifically designed for use as running rigging. Each is engineered to perform superbly under a particular set of circumstances. The choice may seem intimidating. Armed with a little knowledge and an accurate assessment of your sailing needs, the choice becomes clear.

Accurately assess your working load
Formulas for sheet loads are available in the back of this brochure, but consider the following:
Halyard loads are best determined by your rigger. For sheets, halyards, or control lines, anticipated loads are considered working loads. The standard working load for any Samson rope is 20% of the rated break strength.
For example, the total load for an end-of-boom mainsheet going through a four-purchase sheave system may be calculated at 900 lbs. Factoring in a 20% working load, the rope's break strength needs to be five times the working load, or 4,500 lbs. for this application.

Synthetic fibers: What are the differences?
Nylon was the first synthetic fiber widely used in ropes. Reasonably strong (much stronger than the natural fibers it replaced), nylon is still used in dock and anchor lines where its excellent elasticity allows it to absorb shock loads.
The introduction of polyester fiber allowed rope manufacturers to build ropes that were as strong as nylon, but with much less stretch and wet-strength loss. Because it has excellent grip, it works well on winches. Polyester ropes, particularly polyester double braids, became the standard against which all ropes were measured. Polyester is still regarded as an excellent fiber for many marine applications and is widely used for covers on high-performance, or high-modulus double braids.

High-modulus fibers: Which one, for what, and why?
There are several modern high-modulus fibers, each with a unique set of characteristics. The challenge of the rope designer is to match these characteristics with the unique performance requirements of the application for which they are designing.
Dyneema® is a high-modulus polyethylene (HMPE) fiber with a particularly well balanced set of characteristics that allow it to be used in a variety of applications. Extremely lightweight with ultra-high strength, very low stretch, and excellent abrasion, cut, and UV resistance, it is well-suited for use in halyards, control lines, and sheets.
Other high-modulus fibers include aramid fibers that blend very high strength, low stretch, and abrasion resistance with extreme heat resistance; liquid crystal polymer (LCP) fibers; and PBO fibers, which offer the highest strength of all the high-modulus fibers; however, it must be protected from UV light. These are all exceptionally low-creep fibers.
In some cases, Samson blends fibers to take advantage of the relative properties of each of the components. See our product descriptions for more information.

Class I and Class II ropes: What are they?
Samson ropes are classified into two main categories based on fiber type. Ropes manufactured using the traditional fibers of nylon, polyester, and olefin are categorized as Class I. Those ropes, made in whole or in part with any of the high-modulus fibers, are categorized as Class II.

Double braids and single braids: What's the difference?
Samson invented the double braid in the late 1950s, when nylon was still the king of synthetic fibers. This construction incorporates a braided core within a braided cover, each carrying an equal percentage of the total load. This type of construction is common to lines that use the more traditional synthetic fibers like polyester, olefin, and nylon. In addition to carrying up to one-half of the load, the cover serves to protect the core from abrasion or ultraviolet degradation, to provide grip on winches or in clutches and stoppers, and to provide protection from friction-generated heat.
For applications that require higher strength and lighter weight than traditional Class I fibers provide, you will look to a core-dependant double braid. In this construction, the core is made from Class II fibers and serves as the strength member while the cover is typically made of Class I fibers.

Single braids are ropes designed without a separate core. Samson manufactures a wide variety of single braids. For sailing applications, the most common single braid is a 12-strand line. Where necessary or desired, covers can be added to single braids to protect them from exposure to heat, abrasion, or cutting while in use. Alternately, a sailor may opt to strip the cover from a double braid in order to save additional weight aloft for halyard applications. The cover remains intact in areas on the rope where the rope is cleated or winched.

Splicing techniques: Why is knowing the class of my line important?
Splicing techniques are different between Class I and Class II ropes and reflect the differences in strengths and grip between the two groups. It is absolutely critical to use the correct splice for the class of rope being used. The product specifications include rope construction, class and recommended splicing technique.
Racing or cruising, Samson makes a line for every application

Sheets, halyards, and control lines all require different characteristics in strength and stretch. In these charts, you’ll find a Samson line engineered for your size boat, the type of sailing you do, and its function in your rig. For sheets, use your sail plan and the sheet load formula provided to determine the appropriate size/strength for your boat and the wind conditions you expect to encounter.

To calculate total loads on sheets for genoas, jibs, end of boom mainsheets, spinnaker guys and sheets, the following formula can be used (not applicable to multi-hull vessels):

\[(\text{windspeed})^2 \times 0.004 \times (\text{sail area in square feet}) = \text{sheet load at clew in pounds}\]

To calculate sail area based on your sail plan, use the following formulas:

- 100% fore triangle = 1/2J x I
- mainsail = 1/2E x P

**ELASTIC STIFFNESS**

<table>
<thead>
<tr>
<th>BRAND</th>
<th>DIA</th>
<th>2.5mm</th>
<th>3mm</th>
<th>5mm/6mm</th>
<th>6mm</th>
<th>8mm/9mm</th>
<th>10mm/13mm</th>
<th>11mm</th>
<th>12mm</th>
<th>14mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>AmSteel®-Blue</td>
<td>330</td>
<td>490</td>
<td>980</td>
<td>1,500</td>
<td>2,500</td>
<td>3,400</td>
<td>4,300</td>
<td>5,900</td>
<td>7,600</td>
<td></td>
</tr>
<tr>
<td>AmSteel®</td>
<td>1,200</td>
<td>1,900</td>
<td>2,700</td>
<td>3,300</td>
<td>4,600</td>
<td>5,900</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lightning Rope™</td>
<td>240</td>
<td>310</td>
<td>720</td>
<td>1,100</td>
<td>1,900</td>
<td>2,600</td>
<td>3,000</td>
<td>4,400</td>
<td>5,600</td>
<td></td>
</tr>
<tr>
<td>Tech-12™</td>
<td>290</td>
<td>590</td>
<td>880</td>
<td>1,500</td>
<td>2,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Validator-12™</td>
<td>180</td>
<td>240</td>
<td>480</td>
<td>840</td>
<td>1,400</td>
<td>1,800</td>
<td>2,400</td>
<td>3,400</td>
<td>4,200</td>
<td></td>
</tr>
<tr>
<td>Control-DPX™</td>
<td>540</td>
<td>720</td>
<td>1,200</td>
<td>1,400</td>
<td>1,900</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPX™</td>
<td>1,000</td>
<td>1,600</td>
<td>2,500</td>
<td>3,300</td>
<td>4,800</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WarpSpeed II™</td>
<td>850</td>
<td>1,200</td>
<td>1,700</td>
<td>2,400</td>
<td>2,900</td>
<td>4,400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MLX3™</td>
<td>570</td>
<td>970</td>
<td>1,500</td>
<td>1,900</td>
<td>2,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultra-Lite™</td>
<td>150</td>
<td>300</td>
<td>550</td>
<td>700</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XLS3™</td>
<td>80</td>
<td>110</td>
<td>190</td>
<td>280</td>
<td>390</td>
<td>530</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trophy Braid™</td>
<td>40</td>
<td>80</td>
<td>110</td>
<td>150</td>
<td>230</td>
<td>290</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BREAK STRENGTH vs. ELASTIC STIFFNESS**

When selecting a sailing line, the most commonly cited specification—break strength—is often NOT the most critical. For nearly all applications on a recreational sailboat, the strength of modern lines far exceeds both the load that it will experience and the strength of the hardware connected to it. Other characteristics, such as size, hand, weight, coefficient of friction, and flexibility are more important criteria for selection. Of these—elastic stiffness, or stretchiness of the line—is most critical.

Elastic stiffness is the resistance of a line to stretch under load. This is determined by the size, material, and construction of the line; and this is what sailors care about, because it impacts the way the rope handles. Before we can define the elastic stiffness of a rope, we must define one more thing: strain. Strain is the percentage change in length of an object when under the load. The higher the elastic stiffness, the less a line will elongate under load. In other words, the higher the elastic stiffness, the lower the strain. What does this mean, and how do we select the optimum stiffness of a line? Lines that control sail camber, such as halyards,outhauls, cunninghams, or jib sheets, benefit most from high stiffness. If, when beating to windward in a fresh breeze with your sail in the ideal trim, you are hit by a puff, the pressure on the sail would increase and thus the load on all the lines controlling that sail shape would increase—causing them to elongate. This elongation increases the depth of the sail camber, increasing both lift and drag on a sail.

There are cases where choosing a line with some stretch (lower elastic stiffness) is beneficial. A boom vang that is able to stretch when a puff hits allows the mainsail to twist and dump power from the head of the sail, thus preventing the boat from being overpowered. Similarly, using a lower stiffness line for a boom vang is advisable, since it lowers the shock load on hardware and deck fittings.

Samson running and rigging lines allow sailors to select the appropriate lines for the desired elastic stiffness, based on your use and equipment.

**BREAKING STRENGTHS**

<table>
<thead>
<tr>
<th>BRAND</th>
<th>DIA</th>
<th>2.5mm</th>
<th>3mm</th>
<th>5mm</th>
<th>6mm</th>
<th>8mm</th>
<th>10mm</th>
<th>11mm</th>
<th>12mm</th>
<th>14mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>AmSteel®-Blue</td>
<td>1,600</td>
<td>2,500</td>
<td>5,400</td>
<td>8,600</td>
<td>13,700</td>
<td>19,600</td>
<td>23,900</td>
<td>34,000</td>
<td>40,500</td>
<td></td>
</tr>
<tr>
<td>AmSteel®</td>
<td>7,400</td>
<td>10,500</td>
<td>15,500</td>
<td>18,000</td>
<td>27,500</td>
<td>34,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lightning Rope™</td>
<td>1,400</td>
<td>2,100</td>
<td>5,400</td>
<td>7,900</td>
<td>13,500</td>
<td>18,500</td>
<td>20,600</td>
<td>32,000</td>
<td>41,600</td>
<td></td>
</tr>
<tr>
<td>Tech-12™</td>
<td>2,800</td>
<td>5,600</td>
<td>8,200</td>
<td>13,000</td>
<td>18,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Validator-12™</td>
<td>2,000</td>
<td>2,700</td>
<td>5,500</td>
<td>9,400</td>
<td>14,000</td>
<td>19,500</td>
<td>23,500</td>
<td>35,000</td>
<td>43,000</td>
<td></td>
</tr>
<tr>
<td>Control-DPX™</td>
<td>3,700</td>
<td>5,600</td>
<td>9,300</td>
<td>11,000</td>
<td>14,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPX™</td>
<td>5,300</td>
<td>7,600</td>
<td>13,600</td>
<td>18,000</td>
<td>20,300</td>
<td>29,200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WarpSpeed II™</td>
<td>5,100</td>
<td>6,200</td>
<td>9,800</td>
<td>14,000</td>
<td>21,000</td>
<td>26,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MLX3™</td>
<td>3,400</td>
<td>4,500</td>
<td>7,700</td>
<td>12,000</td>
<td>17,200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultra-Lite™</td>
<td>1,200</td>
<td>2,200</td>
<td>4,100</td>
<td>6,300</td>
<td>8,700</td>
<td>11,700</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XLS3™</td>
<td>1,700</td>
<td>2,400</td>
<td>4,100</td>
<td>6,300</td>
<td>8,700</td>
<td>11,700</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trophy Braid™</td>
<td>800</td>
<td>1,400</td>
<td>2,000</td>
<td>3,000</td>
<td>4,000</td>
<td>6,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### BOOM PREVENTER

A boom preventer is advisable, since it lowers the shock load on hardware and deck fittings.

### ELASTIC STIFFNESS AND STRAIN

Of the sail, thus preventing the boat from being overpowered. Similarly, using a lower stiffness line for a vang that is able to stretch when a puff hits allows the mainsail to twist and dump power from the head handles. Before we can define the elastic stiffness of a rope, we must define one more thing: strain. Strain characteristics, such as size, hand, weight, coefficient of friction, and flexibility are more important criteria for selection. Of these—elastic stiffness, or stretchiness of the line—is most critical.

### ROPE SELECTION

Sheets, halyards, and control lines all require different characteristics in strength and stretch. In these charts, you'll find a Samson line.

#### Double Braid Class II

- **PRODUCT CODE:** 437
- **COLORS:** Blue, some sizes also available
- **FEATURES:**
  - Superior wear and resistance
  - Extremely low stretch
  - Blended, strippable cover
- **APPLICATIONS:**
  - Hoist or lower spinnaker
  - Downward tensioner for spinnaker pole
  - In or out trim of spinnaker

#### SINGLE BRAIDS

- **PRODUCT CODE:** 440
- **COLORS:** Blue, green, or red and for improved traction
- **FEATURES:**
  - Wire rope replacement
  - Floats
  - Excellent abrasion resistance
  - High strength
- **APPLICATIONS:**
  - Usage: Hoist or lower spinnaker
  - Usage: Downward tensioner for spinnaker pole
  - Usage: In or out trim of spinnaker

### SIMPLIFIED OPTIONS

**Halyards** for main, jib/genoa, and spinnaker halyards:

- **NEW!**
- **Product Code:** 436
- **COLORS:**
  - LCP-HMPE blend
- **FEATURES:**
  - 12-strand single braid
  - Wire rope replacement
  - Floats
  - Excellent abrasion resistance
  - Non-rotational
- **APPLICATIONS:**
  - Usage: Hoist or lower spinnaker
  - Usage: Downward tensioner for spinnaker pole
  - Usage: In or out trim of spinnaker

**Jib/Genoa Sheets**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>CRUSIER</th>
<th>CRUSIER/RACER</th>
<th>HIGH-TECH RACER</th>
</tr>
</thead>
<tbody>
<tr>
<td>15’</td>
<td>6mm Control-DPX, Trophy</td>
<td>6mm Control-DPX, XLS3</td>
<td>6mm Control-DPX, GPX, WarpSpeed II</td>
</tr>
<tr>
<td>20’</td>
<td>6mm Control-DPX, Trophy</td>
<td>6mm Control-DPX, XLS3</td>
<td>6mm Control-DPX, GPX, WarpSpeed II</td>
</tr>
<tr>
<td>25’</td>
<td>8mm Control-DPX, Trophy, XLS3</td>
<td>8mm Control-DPX, MLX3, XLS3</td>
<td>6mm GPX, WarpSpeed II 8mm Control-DPX</td>
</tr>
<tr>
<td>30’</td>
<td>9mm Control-DPX, Trophy, XLS3</td>
<td>9mm Control-DPX, MLX3</td>
<td>6mm Control-DPX, GPX, WarpSpeed II 9mm Control-DPX</td>
</tr>
<tr>
<td>35’</td>
<td>10mm XLS3 11mm Control-DPX, Trophy</td>
<td>10mm XLS3 11mm Control-DPX, XLS3</td>
<td>6mm Control-DPX, GPX, WarpSpeed II 11mm Control-DPX</td>
</tr>
<tr>
<td>40’</td>
<td>12mm Control-DPX, Trophy, XLS3</td>
<td>12mm Control-DPX, MLX3, XLS3</td>
<td>9mm Control-DPX, 10mm GPX, WarpSpeed II 10mm Control-DPX</td>
</tr>
<tr>
<td>45’</td>
<td>12mm Control-DPX, XLS3</td>
<td>12mm Control-DPX, MLX3</td>
<td>9mm Control-DPX, 10mm GPX, WarpSpeed II 10mm Control-DPX</td>
</tr>
<tr>
<td>50’</td>
<td>12mm Control-DPX, XLS3</td>
<td>12mm Control-DPX, MLX3</td>
<td>9mm Control-DPX, 10mm GPX, WarpSpeed II 10mm Control-DPX</td>
</tr>
</tbody>
</table>

**Main Sheets** for end of boom sheeting:

<table>
<thead>
<tr>
<th>SIZE</th>
<th>CRUSIER</th>
<th>CRUSIER/RACER</th>
<th>HIGH-TECH RACER</th>
</tr>
</thead>
<tbody>
<tr>
<td>15’</td>
<td>6mm Control-DPX, Trophy, XLS3</td>
<td>6mm Control-DPX, XLS3</td>
<td>6mm Control-DPX, XLS3, Ultra-Lite</td>
</tr>
<tr>
<td>20’</td>
<td>8mm Control-DPX, Trophy, XLS3</td>
<td>8mm Control-DPX, XLS3</td>
<td>6mm Control-DPX, GPX, WarpSpeed II</td>
</tr>
<tr>
<td>25’</td>
<td>8mm Control-DPX, Trophy, XLS3</td>
<td>8mm Control-DPX, XLS3</td>
<td>6mm Control-DPX, GPX, WarpSpeed II</td>
</tr>
<tr>
<td>30’</td>
<td>9mm Control-DPX, Trophy, XLS3</td>
<td>9mm Control-DPX, XLS3</td>
<td>9mm Control-DPX, Ultra-Lite</td>
</tr>
<tr>
<td>35’</td>
<td>10mm XLS3 11mm Control-DPX, Trophy</td>
<td>10mm XLS3 11mm Control-DPX, XLS3</td>
<td>9mm Control-DPX, Ultra-Lite 11mm Control-DPX</td>
</tr>
<tr>
<td>40’</td>
<td>12mm Control-DPX, Trophy, XLS3</td>
<td>12mm Control-DPX, MLX3, XLS3</td>
<td>12mm Control-DPX, XLS3</td>
</tr>
<tr>
<td>45’</td>
<td>12mm Control-DPX, XLS3</td>
<td>12mm Control-DPX, MLX3</td>
<td>12mm Control-DPX, XLS3</td>
</tr>
<tr>
<td>50’</td>
<td>12mm Control-DPX, XLS3</td>
<td>12mm Control-DPX, MLX3</td>
<td>12mm Control-DPX, XLS3</td>
</tr>
</tbody>
</table>

**Spinnaker Sheets**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>CRUSIER</th>
<th>CRUSIER/RACER</th>
<th>HIGH-TECH RACER</th>
</tr>
</thead>
<tbody>
<tr>
<td>15’</td>
<td>6mm Control-DPX, Trophy, XLS3</td>
<td>6mm Control-DPX, XLS3</td>
<td>6mm Control-DPX, Ultra-Lite</td>
</tr>
<tr>
<td>20’</td>
<td>8mm Control-DPX, Trophy, XLS3</td>
<td>8mm Control-DPX, XLS3</td>
<td>8mm Control-DPX, Ultra-Lite</td>
</tr>
<tr>
<td>25’</td>
<td>8mm Control-DPX, Trophy, XLS3</td>
<td>8mm Control-DPX, XLS3</td>
<td>8mm Control-DPX, Ultra-Lite</td>
</tr>
<tr>
<td>30’</td>
<td>9mm Control-DPX, Trophy, XLS3</td>
<td>9mm Control-DPX, XLS3</td>
<td>9mm Control-DPX, Ultra-Lite</td>
</tr>
<tr>
<td>35’</td>
<td>10mm XLS3 11mm Control-DPX, Trophy</td>
<td>10mm XLS3 11mm Control-DPX, XLS3</td>
<td>10mm Control-DPX, Ultra-Lite 11mm Control-DPX</td>
</tr>
<tr>
<td>40’</td>
<td>12mm Control-DPX, Trophy, XLS3</td>
<td>12mm Control-DPX, MLX3, XLS3</td>
<td>12mm Control-DPX, XLS3</td>
</tr>
<tr>
<td>45’</td>
<td>12mm Control-DPX, XLS3</td>
<td>12mm Control-DPX, MLX3</td>
<td>12mm Control-DPX, XLS3</td>
</tr>
<tr>
<td>50’</td>
<td>12mm Control-DPX, XLS3</td>
<td>12mm Control-DPX, MLX3</td>
<td>12mm Control-DPX, XLS3</td>
</tr>
</tbody>
</table>

**Spinnaker Guys**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>CRUSIER</th>
<th>CRUSIER/RACER</th>
<th>HIGH-TECH RACER</th>
</tr>
</thead>
<tbody>
<tr>
<td>15’</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>20’</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>25’</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>30’</td>
<td>8mm Control-DPX, 9mm XLS3</td>
<td>9mm Control-DPX, 10mm XLS3</td>
<td>9mm Control-DPX, 10mm XLS3</td>
</tr>
<tr>
<td>35’</td>
<td>10mm XLS3 11mm Control-DPX, 10mm MLX3</td>
<td>10mm XLS3 11mm Control-DPX, XLS3</td>
<td>10mm Control-DPX, 11mm Control-DPX</td>
</tr>
<tr>
<td>40’</td>
<td>11mm Control-DPX, 12mm XLS3</td>
<td>11mm Control-DPX, 12mm XLS3</td>
<td>11mm Control-DPX, 12mm XLS3</td>
</tr>
<tr>
<td>45’</td>
<td>12mm Control-DPX, 12mm Trophy, XLS3</td>
<td>12mm Control-DPX, 12mm Trophy, XLS3</td>
<td>12mm Control-DPX, 12mm Trophy, XLS3</td>
</tr>
<tr>
<td>50’</td>
<td>12mm Control-DPX, 16mm Trophy</td>
<td>12mm Control-DPX, 16mm Trophy</td>
<td>12mm Control-DPX, 16mm Trophy</td>
</tr>
</tbody>
</table>
WarpSpeed and drag on a sail. What does this mean, and how do we select the optimum stiffness of a line? Lines that control sail for selection. Of these—elastic stiffness, or stretchiness of the line—is most critical. Characteristics, such as size, hand, weight, coefficient of friction, and flexibility are more important criteria when selecting a sailing line. The most commonly cited specification—break strength—is often NOT 100%.

1/2J × I = mainsail = 1/2E × P

(windspeed)^2 × 0.004 × (sail area in square feet) = sheet load at clew in pounds

This 12-strand single braid is made from GPX’s Control-DPX. AmSteel.

FEATURES:
- Size-for-size, the same strength as wire rope
- Extremely low stretch
- Floats
- Superior wear and flex fatigue
- Torque-free construction
- Easily spliced
- UV stabilized

CONSTRUCTION:
- 12-strand single braid

FIBER: HMPE
COLORS: Blue, some sizes also available by special order in black, gray, green, orange, red, or yellow
SPICE/CLASS: 12-Strand Class II

NEW! GPX™ Product Code: 437
Samson’s highest-performing line, GPX’s core is a custom blend of Dyneema® SK99 and DM20, providing the highest possible elastic stiffness and virtually no creep. The specially-blended cover provides superior grip, excellent durability, and heat resistance.

FEATURES:
- Highest strength
- Minimal creep and lowest stretch
- Lightweight
- Blend, stripable cover for improved friction

CONSTRUCTION:
- Core-dependent double braid

FIBER (Core/Cover):
HMPE / Aramid-Polyester blend
COLORS:
Carbon with midnight, ocean, daybreak or dawn tracers and matching cores
SPICE/CLASS:
Duple Braid Class III

NEW! MLX3™ Product Code: 436
MLX3 is a lightweight, core-dependent line with excellent strength and moderate stretch. The core is coated to match the cover, making the line stripappable for greater weight savings.

FEATURES:
- High strength
- Lightweight
- Moderate stretch
- Coated core matches cover

CONSTRUCTION:
- Core-dependent double braid

FIBER (Core/Cover):
HMPE blend / Polyester
COLORS:
Slate with midnight, ocean, daybreak or dawn tracers and matching cores
SPICE/CLASS:
Duple Braid Class II

NEW! Lightning Rope™ Product Code: 379
This 12-strand construction blends Vectran® and Dyneema® fibers into a reliable, lightweight line with very low stretch and resistance to creep elongation.

FEATURES:
- High strength-to-weight ratio
- Extremely low stretch

CONSTRUCTION:
- 12-strand single braid

FIBER:
HMPE
COLORS:
Black, blue, green, or red
SPICE/CLASS:
12-Strand Class II

WarpSpeed II™ Product Code: 440
The strength member in this double braid is 100% Dyneema® with a flexible 24-strand polyester cover. Strip the cover to save weight.

FEATURES:
- High strength
- Extremely low stretch
- Lightweight
- Excellent abrasion resistance

CONSTRUCTION:
- Core-dependent double braid

FIBER (Core/Cover):
HMPE / Polyester
COLORS:
Variegated beige with black, blue, green, orange, and yellow
SPICE/CLASS:
Double Braid Class II

Sunset

AmSteel® Blue Product Code: 872
This 12-strand single braid is made from 100% Dyneema®, which provides the maximum strength-to-weight ratio. It is lightweight, floats, and has high abrasion and cut resistance. Cover wherever winch or rope clutches are used.

FEATURES:
- Size-for-size, the same strength as wire rope
- Extremely low stretch
- Floats
- Superior wear and flex fatigue
- Torque-free construction
- Easily spliced
- UV stabilized

CONSTRUCTION:
- 12-strand single braid

FIBER: HMPE
COLORS:
Blue, some sizes also available by special order in black, gray, green, orange, red, or yellow
SPICE/CLASS:
12-Strand Class II

AmSteel® Product Code: 870
An economical alternative to AmSteel®Blue, AmSteel® is a non-rotational rope that yields high strength and low stretch. It is flexible, easily spliced, and resists flex-fatigue and abrasion.

FEATURES:
- High strength
- Extremely low stretch
- Floats
- Easy to splice
- Extremely lightweight
- Wire rope replacement

CONSTRUCTION:
- 12-strand single braid

FIBER:
HMPE
COLORS:
Gray, red, blue, green, orange, and yellow
SPICE/CLASS:
12-Strand Class II

Lightning Rope™ Product Code: 379
This 12-strand construction blends Vectran® and Dyneema® fibers into a reliable, lightweight line with very low stretch and resistance to creep elongation.

FEATURES:
- High strength-to-weight ratio
- Extremely low stretch

CONSTRUCTION:
- 12-strand single braid

FIBER:
HMPE
COLORS:
Black, blue, green, or red
SPICE/CLASS:
12-Strand Class II

End of Boom Sheeting
SUNSET boom preventer is advisable, since it lowers the shock load on hardware and deck fittings. To calculate typical loads on sheets for genoas, jibs, end of boom mainsheets, spinnaker guys and sheets, the following formula is engineered for your size boat, the type of sailing you do, and its function in your rig. For sheets, use your sail plan and the sheet load by special order in black, gray, blue, some sizes also available. COLORS: > UV stabilized > Torque-free construction > Lightweight > Floats > Wire rope replacement CONSTRUCTION: 12-strand single braid FIBER: Aramid COLORS: Black, blue, green, or red SPICE/CCLASS: 12-Strand Class II 

Validator-12™ Product Code: 446 
Validator-12 is a 12-strand construction made of 100% Vectran® This easy-to-splice, no-creep line is extremely strong and lightweight. FEATURES: > High strength-to-weight ratio > Extremely low stretch > Negligible creep > Samthane coated > Non-rotational > Heat resistant > Excellent durability > Abrasion resistant > Wire rope replacement CONSTRUCTION: 12-strand single braid FIBER: LCP COLORS: Black, blue, green, or red SPICE/CCLASS: 12-Strand Class II 

Control-DPX™ Product Code: BB8 
Control-DPX® combines Dyneema® fiber and Samson’s patented DPX® fiber technology into a strong, lightweight line that is winch- and cleat-friendly while being incredibly easy on the hands. It performs well where winches are required without an added cover, while retaining the great “feel” you want in a mainsheet or guy. Control-DPX® is not recommended for use with self-tailing winches. FEATURES: > High strength > Low stretch > Solid grip on winch drums > Runs through blocks without kinking > Easy to handle > Lightweight > Easy to splice CONSTRUCTION: 12-strand single braid FIBER: HMPE-Polyester blend COLORS: White with black, blue, green, red, or white tracers SPICE/CCLASS: 12-Strand Class II 

Ultra-Lite™ Product Code: 441 
Great for light-wind sheets. This lightweight, floating double braid has a 24-strand MFP cover and a blended core of MFP and Dyneema®. FEATURES: > Floats > High strength > Low stretch CONSTRUCTION: Core-dependent double braid FIBER (Core/Cover): HMPE blend / Polypropylene COLORS: Black, blue, green, or red — all with yellow tracers SPICE/CCLASS: Double Braid Class II 

NEW! XLS3™ Product Code: 435 
XLS3 is an update to a classic line — now stronger and more responsive with an updated look. Cruising sailors looking for optimal performance will appreciate the low-stretch polyester construction, smooth rendering, and long life of XLS3. FEATURES: > Excellent abrasion resistance > Easy to splice > Great value using learnings from our elite-level rope CONSTRUCTION: Double braid FIBER (Core/Cover): Polyester / Polyester COLORS: White with midnight, ocean, daybreak or dawn tracers and solid navy, khaki, and white SPICE/CCLASS: Double Braid Class I 

Trophy Braid™ Product Code: 453 
Trophy Braid line has a soft, fuzzy cover that is easy on the hands. This double braid construction has a spun polyester cover and a polyester core. FEATURES: > Easy to hold, wet or dry > Holds well in all types of cleats > Has a solid grip on winch drums CONSTRUCTION: Double braid FIBER (Core/Cover): Polyester / Spun Polyester COLORS: Black, blue, green, red, or white — all with a green and red ID SPICE/CCLASS: Double Braid Class I
Dock & Anchor Lines

Whether power or sail, the most frequently used lines aboard are the dock and anchor lines. It's a fact of boating life that, for most of us, our boats spend more time moored than underway. Protect your investment and give yourself a little peace of mind by ensuring that you've got the best dock and anchor lines available.

Is there really a difference?
Yes. All Samson lines are built with 100% premium nylon that provides excellent stretch and flexibility. Nylon's elastic elongation helps smooth out the surge effects of wakes, waves, wind, or heavy seas, making nylon the perfect fiber for dock and anchor lines. All of Samson's colored dock lines are produced with solution-dyed nylon to prevent bleed or fade.

Consistent quality from the company that moors more vessels than any other
Our recreational marine products are subjected to the same rigorous testing and quality control under which we produce mooring lines and hawsers for some of the world's largest vessels. They are also professionally spliced, with thimbles included on all anchor lines.

CHECK YOUR LOCAL DEALER FOR COLOR AND SIZE AVAILABILITY.

DOCK LINE SELECTION GUIDE
Strengths are approximate averages of new rope.

<table>
<thead>
<tr>
<th>Boat Size</th>
<th>Dock Line Length</th>
<th>3/8&quot; (9 mm)</th>
<th>1/2&quot; (12 mm)</th>
<th>5/8&quot; (16 mm)</th>
<th>3/4&quot; (18 mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–25 ft</td>
<td>10'</td>
<td>4,900 lb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26–30 ft</td>
<td>15'</td>
<td>4,900 lb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31–35 ft</td>
<td>20'</td>
<td>4,900 lb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36–40 ft</td>
<td>25'</td>
<td>4,900 lb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>41–50 ft</td>
<td>30'</td>
<td>4,900 lb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51–60 ft</td>
<td>35'</td>
<td>4,900 lb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>61–75 ft</td>
<td>40' &amp; 50'</td>
<td>4,900 lb</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For storm conditions upgrade one size and double chafe protection.

CUSTOM DOCK LINES
Formulas for calculating custom dock lines:

Bow Lines = 1-1/2 × Beam
Spring Lines = 3/4 × Length Over All
Stern Lines = 1-1/2 to 2 × Beam

ANCHOR LINES

Whether power or sail, the most frequently used lines aboard are the dock and anchor lines. It's a fact of boating life that, for most of us, our boats spend more time moored than underway. Protect your investment and give yourself a little peace of mind by ensuring that you've got the best dock and anchor lines available.

Is there really a difference?
Yes. All Samson lines are built with 100% premium nylon that provides excellent stretch and flexibility. Nylon's elastic elongation helps smooth out the surge effects of wakes, waves, wind, or heavy seas, making nylon the perfect fiber for dock and anchor lines. All of Samson's colored dock lines are produced with solution-dyed nylon to prevent bleed or fade.

Consistent quality from the company that moors more vessels than any other
Our recreational marine products are subjected to the same rigorous testing and quality control under which we produce mooring lines and hawsers for some of the world's largest vessels. They are also professionally spliced, with thimbles included on all anchor lines.

CHECK YOUR LOCAL DEALER FOR COLOR AND SIZE AVAILABILITY.

ANCHOR LINE SELECTION GUIDE
Strengths are approximate averages of new rope.

<table>
<thead>
<tr>
<th>Boat Size</th>
<th>Gold-N-Braid™</th>
<th>Super Strong™</th>
<th>Pro-Set™</th>
</tr>
</thead>
<tbody>
<tr>
<td>15–25 ft</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
</tr>
<tr>
<td>16–20 ft</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
</tr>
<tr>
<td>21–25 ft</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
</tr>
<tr>
<td>26–30 ft</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
</tr>
<tr>
<td>31–35 ft</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
</tr>
<tr>
<td>36–40 ft</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
</tr>
<tr>
<td>41–50 ft</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
</tr>
<tr>
<td>51–60 ft</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
</tr>
<tr>
<td>61–75 ft</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
</tr>
<tr>
<td>76–90 ft</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
<td>3/8 in.</td>
</tr>
<tr>
<td>91–100 ft</td>
<td>1 in.</td>
<td>1 in.</td>
<td>1 in.</td>
</tr>
<tr>
<td>101–120 ft</td>
<td>1 in.</td>
<td>1 in.</td>
<td>1 in.</td>
</tr>
</tbody>
</table>

*For storm conditions upgrade one size and double chafe protection.

CUSTOM DOCK LINES
Formulas for calculating custom anchor lines:

Gold-N-Braid™ = 1-1/2 × Beam
Super Strong™ = 3/4 × Length Over All
Pro-Set™ = 1-1/2 to 2 × Beam

ANCHOR LINE LENGTHS

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Gold-N-Braid™</th>
<th>Super Strong™</th>
<th>Pro-Set™</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8 in.</td>
<td>100', 150', 200'</td>
<td>100', 150', 200'</td>
<td>100', 150'</td>
</tr>
<tr>
<td>1/2 in.</td>
<td>100', 150', 200'</td>
<td>100', 150', 200', 250', 300'</td>
<td>100', 150', 200', 300'</td>
</tr>
<tr>
<td>5/8 in.</td>
<td>200', 250'</td>
<td>150', 200', 250', 300'</td>
<td>150', 200', 250'</td>
</tr>
</tbody>
</table>
CHOOSING THE BEST LINE FOR THE JOB

Nylon was the first synthetic fiber widely used in ropes. Reasonably strong, low stretch, and abrasion resistant, nylon performs superbly under a particular set of circumstances. It is strong enough for halyards and sheets,却又 light enough for sheets. It has a smooth finish which makes splicing easier.

Polyester ropes, particularly polyester double braids, are resistant to UV and abrasion. Polyester is also lighter than nylon and offers additional flexibility for easier handling.

Samson offers a large variety of ropes specifically designed for this application. Samson manufactures a wide variety of single braids. For applications that require higher strength and lighter weight, there is a high-modulus polyethylene (HMPE) fiber with a strength-to-weight ratio: it is stronger than steel, so light if floats, and does not absorb water. Lash-It! comes in 180’ easily dispensed from a plastic tube.

**Samson Splice Training Kit**

Comes complete with a fid, pusher, instructions for a double braid eye splice, and two lengths of double braided ropes.

Product Code: 999-0010

**Samson Splicing Kit**

Comes with a pusher, and 5 aluminum tubular fids (size range 1/4” through 1/2” diameter).

Product Code: 999-0070

**Selma Fids™**

Made from highly polished stainless steel, Selma Fids are patented worldwide. Available in sets only, the Selma Fid may be used to splice hollow braided lines from 1/8” to 9/16”, or double braid and 3-strand rope up to 1-1/8”

Product Code: 903

**Lash-It!™**

Product Code: B11

Lash-It! has been called “the sailor’s duct tape” because of its multiple uses on any sailboat. A single braid made from HMPE fiber with Samthane urethane coating, Lash-It! offers a high strength-to-weight ratio: it is stronger than steel, so light if floats, and does not absorb water. Lash-It! comes in 180’ easily dispensed from a plastic tube.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Size Diameter</th>
<th>Size Diameter</th>
<th>Strength Average</th>
<th>Weight Per 100 ft.</th>
<th>POUNDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/16 in.</td>
<td>1.75 mm</td>
<td>500 lb</td>
<td>0.12 lb</td>
<td></td>
</tr>
<tr>
<td>3/32 in.</td>
<td>2.20 mm</td>
<td>650 lb</td>
<td>0.16 lb</td>
<td></td>
</tr>
</tbody>
</table>

**MFP Floatline™**

Product Code: 461

Double braid with a multifilament polypropylene cover and floating core. MFP Floatline is yellow with red ID.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Size Diameter</th>
<th>Size Diameter</th>
<th>Strength Average</th>
<th>Weight Per 100 ft.</th>
<th>POUNDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 in.</td>
<td>6 mm</td>
<td>1,700 lb</td>
<td>1.4 lb</td>
<td></td>
</tr>
<tr>
<td>3/8 in.</td>
<td>9 mm</td>
<td>3,200 lb</td>
<td>2.7 lb</td>
<td></td>
</tr>
<tr>
<td>1/2 in.</td>
<td>12 mm</td>
<td>5,200 lb</td>
<td>4.5 lb</td>
<td></td>
</tr>
<tr>
<td>5/8 in.</td>
<td>16 mm</td>
<td>7,400 lb</td>
<td>8.0 lb</td>
<td></td>
</tr>
</tbody>
</table>

**Quik-Splice™**

Product Code: 335

Quik-Splice is a fast-splicing single braid constructed with high-strength Ultra Blue copolymer olefin fiber. It floats and has high wet and dry abrasion resistance. The Ultra Blue fiber has excellent dielectric properties and provides superior resistance to sunlight degradation.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Size Diameter</th>
<th>Size Diameter</th>
<th>Strength Average</th>
<th>Weight Per 100 ft.</th>
<th>POUNDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/4 in.</td>
<td>6 mm</td>
<td>1,400 lb</td>
<td>1.1 lb</td>
<td></td>
</tr>
<tr>
<td>5/16 in.</td>
<td>8 mm</td>
<td>2,500 lb</td>
<td>1.7 lb</td>
<td></td>
</tr>
<tr>
<td>3/8 in.</td>
<td>9 mm</td>
<td>3,500 lb</td>
<td>2.7 lb</td>
<td></td>
</tr>
<tr>
<td>7/16 in.</td>
<td>11 mm</td>
<td>4,600 lb</td>
<td>3.5 lb</td>
<td></td>
</tr>
<tr>
<td>1/2 in.</td>
<td>12 mm</td>
<td>6,700 lb</td>
<td>4.7 lb</td>
<td></td>
</tr>
<tr>
<td>9/16 in.</td>
<td>14 mm</td>
<td>7,500 lb</td>
<td>6.0 lb</td>
<td></td>
</tr>
<tr>
<td>5/8 in.</td>
<td>16 mm</td>
<td>10,900 lb</td>
<td>7.8 lb</td>
<td></td>
</tr>
</tbody>
</table>

**Accessory Cord™**

Product Code: 480

With a polyester cover and nylon core, Samson’s Accessory Cord has excellent flexibility, knotting, and strength characteristics for a smooth running, torque-free cord.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Size Diameter</th>
<th>Size Diameter</th>
<th>Strength Average</th>
<th>Weight Per 100 ft.</th>
<th>POUNDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/64 in.</td>
<td>2 mm</td>
<td>230 lb</td>
<td>0.20 lb</td>
<td></td>
</tr>
<tr>
<td>1/8 in.</td>
<td>3 mm</td>
<td>600 lb</td>
<td>0.50 lb</td>
<td></td>
</tr>
<tr>
<td>5/32 in.</td>
<td>4 mm</td>
<td>1,000 lb</td>
<td>0.80 lb</td>
<td></td>
</tr>
<tr>
<td>3/16 in.</td>
<td>5 mm</td>
<td>1,200 lb</td>
<td>1.4 lb</td>
<td></td>
</tr>
<tr>
<td>1/4 in.</td>
<td>6 mm</td>
<td>2,200 lb</td>
<td>1.8 lb</td>
<td></td>
</tr>
<tr>
<td>9/32 in.</td>
<td>7 mm</td>
<td>2,800 lb</td>
<td>2.3 lb</td>
<td></td>
</tr>
<tr>
<td>5/16 in.</td>
<td>8 mm</td>
<td>3,500 lb</td>
<td>3.0 lb</td>
<td></td>
</tr>
<tr>
<td>3/8 in.</td>
<td>9 mm</td>
<td>4,300 lb</td>
<td>3.8 lb</td>
<td></td>
</tr>
</tbody>
</table>
WHY SAMSON?

People and technology make the difference
Changes are you have seen Samson synthetic lines at work all around you. For more than 140 years, Samson has led the way in developing high-performance cordage products to meet the most demanding applications in the world. The running rigging you select for your boat carries the legacy of our experience in industries as diverse as commercial marine, safety and rescue, arborist, utilities, even the space program. So where’s the advantage for you? When you buy Samson, you are getting a lot more than a rope. Our all-inclusive package of technology, products, manufacturing excellence, and experience provide our customers peace of mind.

So whether you’re looking for new sheets to trim your composite genoa or replacing the halyards on a traditional schooner, look for Samson. It assures you of performance you can depend on, anytime, anywhere.

> TECHNOLOGY Staffed with dedicated scientists and application engineers, Samson’s R&D department is dedicated to problem solving, and leads the industry in the development of lighter, stronger, more durable ropes. Equally important to product innovation is our ability to stand confidently behind our products with accurate, reliable product specifications based on rigorous testing and measuring.

> PRODUCTS Samson products are considered state of the art by sailors around the world. Samson has pioneered the use of new synthetic fibers, unique constructions, and coatings to improve the service life of ropes, reduce weight, reduce snagging, enhance abrasion resistance, and make splicing easier.

> MANUFACTURING Samson’s standards of manufacturing guarantee a quality product every time. Our manufacturing plants, in Lafayette, Louisiana and Ferndale, Washington are both ISO certified and utilize LEAN manufacturing principles.

> SERVICE World-class service and support, whenever you need it, wherever you need it.

> EXPERIENCE When you sail with Samson, your boat carries the legacy of our 140+ years’ experience providing rope to diverse industries. Known for excellence and quality, we have the experience, integrity, and reliability you can get only from The Strongest Name in Rope.

Samson App
For the iPhone and iPad this handy app features:
> Inspection and retirement criteria
> Internal and external abrasion inspection information
> Splice instructions
Download it at SamsonRope.com

---

TRADEMARK NOTICES:

Dyneema® is a registered trademark of Royal DSM N.V.
Dyneema® is DSM’s high-performance polyethylene product.

Dynamic is a registered trademark of Samson Rope Technologies, Inc.

All Samson named products herein are trademarks of Samson Rope Technologies, Inc.

---

2090 Thornton Street, Ferndale, WA 98248 USA
Tel 01.360.384.4669
Fax 01.360.384.0572
SamsonRope.com