

**YALE CORDAGE, INC**  
**77 Industrial Park Rd.**  
**Saco, Maine 04072**  
**Arborist Ropes**

**INSTRUCTIONS:**

The information contained herein is not exhaustive and specifications are subject to change in accordance with the CE regulations. Individuals using these products should be trained or under the direct supervision of a trained expert in the use of these ropes.

**USE:**

Yale's static Arborist climbing lines are designed for use as general-purpose Arborist climbing lines and tree surgery rope. They are not for use in a personal fall arrest system and should always be used in conjunction with ascending, descending and safety hardware and devices for positioning work.

**NOTE: When choosing to use a Type B, lower performance static climbing line over the higher performance Type A, greater care must be taken in all aspects of use and care of the product. The effects of abrasion, cuts or general wear and tear on a Type B product must be carefully avoided and evaluated due to the lower performance capability of the ropes. Great care should also be taken to minimize fall potentials when using a lower performance rope.**

**For use in rope access and work positioning, Type A ropes are more suitable than Type B.**

**STORAGE AND CARE:**

To ensure safety and performance, the inspection and maintenance of climbing and lifting lines should be among every arborists primary concern.

- 1: Inspect all ropes for breaks, cuts, abrasion and melted or fused fiber prior to each use.
- 2: Wash ropes periodically to remove dirt and grit. Simply rinse lines with a garden hose, and allow them to air dry. **DO NOT** use solvents, bleach, or harsh detergents when washing lines, and never apply a heat source when drying. Improper handling and care can dramatically alter the properties of a rope.
- 3: Coil rope loosely, for storage, being sure to remove any excess twists or kinks. To maximize rope life, always store each line in a dark dry place.

**ROPE WEAR AND OBSOLESCENCE:**

Upon examination of the rope, if damage is found, remove the rope from service, retire it immediately, cut it into small pieces and discard it, then replace it with an undamaged line.

**Excessive wear** may be indicated by broken or cut strands that reduce the ropes strength throughout the length and not just the area of damage. As a general rule, retire the rope when more than 3 broken or cut strands are visible, or if two adjacent strands are compromised.

**Excessive wear** can also be indicated by melted or fused fibers, which is generally the result of an abused rope. The melted or fused polyester fibers result from surface temperatures over 249 C (480 F), caused by excessive load weights, rapid descents or a hot exhaust heat source. The damaged fibers will compromise the rope strength and it should be retired immediately.

**Normal wear** is indicated by the appearance of small fuzzy fiber breaks on the rope that creates a fuzzy texture known as "mild abrasion". This is considered good wear and will not effect the performance of the rope. The nubby surface actually protects the underlying fiber from further wear.

**Chemical attack or contamination** of the rope may produce localized discolorations caused by anything from gear and chain oil to gasoline and battery acid. If any doubt exists whether or not the rope has been contaminated it should be retired.

**Abrasion** of the rope should always be avoided. All ropes will be severely damaged if subjected to rough surfaces or sharp edges. Chocks, bits, winches, drums and other surfaces should be kept clean and free of rust and burrs. Ensure proper functioning, size and condition of pulleys used. Clamps and locks will damage and weaken rope and should be used with extreme caution.

**TEMPERATURE:**

The tensile strengths of the ropes tested were done at room temperature 21 C (70 F). Higher temperatures lower the tensile strengths of the rope. At the boiling point of water 100 C (212 F) a decrease in strength of 30% or higher can result.

**TERMINATION:**

Splicing of the Arborist lines should be done by qualified individuals only.

**PERFORMANCE:**

The Arborist ropes mentioned in this information package have been CE marked in accordance with the clauses indicated in EC directive 89/686/EEC Annex II and in EN1891: (1998) as detailed in Technical File 001 for XTC, Issue 9 Rev 20 and File 004 For 11mm Type B Issue 2 Rev 3. These ropes are intended for static climbing and lowering applications only. Working loads and ultimate strengths apply only to new or like new ropes in good condition used under normal service, which have not been subjected to excessive wear or used in critical applications. Overloading of the rope is never recommended and can dramatically reduce a ropes capabilities and life.

Dynamic loading or shock loading the rope constitutes excessive wear and voids normal working loads, the rope should be retired. Instantaneous changes in load, up or down, in excess of 10% of the lines rated working load constitutes a hazardous shock load. Whenever a load is picked up, stopped or swung there is an increase in the force on the rope due to dynamic loading. The more sudden the change in load is, the greater the force put on the line is.

**MARKING:**

The CE accreditation is awarded after meeting the applicable technical standards described in the performance section. And having exhibited robust production processing and the Quality Assurance procedures necessary to ensure a reproducible process that includes traceability and in house testing.

EC Type – examination by: SGS United Kingdom Ltd., WESTON-SUPER-MARE, BS22 6WA, UK (Notified Body No. 0120)

The ropes included in the CE standard have been marked at both ends in accordance with aforementioned standard with the following- the rope type (A or B), the diameter in millimeters, the European standard number, the last 2 digits of the year of manufacture, YALE CORDAGE and the batch or serial number of the rope.

An ID marker has also been utilized and includes our name, the European standard number, the rope type, the year of manufacture and the materials that make up the rope.

**SHIPPING:**

No special packaging is necessary for transportation. Hanks should be bagged or boxed to prevent snags and maintain cleanliness and reels should receive standard wraps, covers or boxed as necessary.

**WARNING:**

**If in doubt of the ropes condition or previous usage retire the rope immediately. Not all damage to a rope is visible. A single shock load or a load over its rated working load can greatly reduce a ropes performance and result in damage, serious injury or death. Tree surgery is inherently dangerous and the improper use or selection of your equipment can be fatal. Only trained experts or users under the direction of an expert should be using these products. These ropes do conduct electricity especially when damp or wet. Avoid contact with all overhead cables and consult the local electrical authority for information.**

Product	XTC - Type A	XTC-12 -Type B	11 mm Blaze
Test -	Typical results	Typical results	Typical results
Material	Polyester	Polyester/Olefin	Polyester
Diameter (mm)	12.6	12.8	10.8
Rope mass (g/m)	120	95	87
Knot ability	0.9	0.5	0.6
Static elongation %	2.7	2.7	1.3
Static Strength kN	25.5	24.8	25.6 Type B
Spliced Strength	26.7	NA	24.4
Knotted strength kN	21.0	17.7	20.5 Type B
Fall Arrest Peak kN	5.7	5.4	5.7 Type B
Dynamic Drops	5+	5+	5+ type B
Shrinkage	0	0	0
Sleeve Core %	74/26	100	62/38
Sheath Slippage	< 1%	NA	< 1%



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**YALE CORDAGE, INC**  
**77 Industrial Park Rd.**  
**Saco, Maine 04072**  
**11.7mm & 12mm Type A**

**INSTRUCTIONS:**

The information contained herein is not exhaustive and specifications are subject to change in accordance with the CE regulations. Individuals using these products should be trained or under the direct supervision of a trained expert in the use of these ropes.

**USE:**

Yale's low stretch 11.7mm/12mm lines are designed for use as general-purpose positioning, restraint & rescue lines. They are not for use in a personal fall arrest system and should always be used in conjunction with ascending, descending and safety hardware and devices for positioning work.

**STORAGE and CARE:**

To ensure safety and performance, the inspection and maintenance of climbing lines should be among every user's primary concern.

- 1: Inspect all ropes for breaks, cuts, abrasion and melted or fused fiber prior to each use.
- 2: Wash ropes periodically to remove dirt and grit. Simply rinse lines with a garden hose, and allow them to air dry. DO NOT use solvents, bleach, or harsh detergents when washing lines, and never apply a heat source when drying. Improper handling and care can dramatically alter the properties of a rope.
- 3: Coil rope loosely, for storage, being sure to remove any excess twists or kinks. To maximize rope life, always store each line in a dark dry place.

**ROPE WEAR and OBSOLESCENCE:**

Upon examination of the rope, if damage is found, remove the rope from service, retire it immediately, cut it into small pieces and discard it, then replace it with an undamaged line.

Excessive wear may be indicated by broken or cut strands that reduce the ropes strength throughout the length and not just the area of damage. As a general rule, retire the rope when more than 3 broken or cut strands are visible, or if two adjacent strands are compromised.

Excessive wear can also be indicated by melted or fused fibers, which is generally the result of an abused rope. The melted or fused polyester fibers result from surface temperatures over 480 degrees F, caused by excessive load weights, rapid descents or a hot exhaust heat source. The damaged fibers will compromise the rope strength and it should be retired immediately.

Normal wear is indicated by the appearance of small fuzzy fiber breaks on the rope, that creates a fuzzy texture known as "mild abrasion". This is considered good wear and will not effect the performance of the rope. The nubby surface actually protects the underlying fiber from further wear.

Chemical attack or contamination of the rope may produce localized discolorations caused by anything from gear and chain oil to gasoline and battery acid. If any doubt exists whether or not the rope has been contaminated it should be retired.

Abrasion of the rope should always be avoided. All ropes will be severely damaged if subjected to rough surfaces or sharp edges. Chocks, bits, winches, drums and other surfaces should be kept clean and free of rust and burrs. Ensure proper functioning, size and condition of pulleys used. Clamps and locks will damage and weaken rope and should be used with extreme caution.

**TEMPERATURE:**

The tensile strengths of the ropes tested were done at room temperature (70 F). Higher temperatures lower the tensile strengths of the rope. At the boiling point of water (212 F) a decrease in strength of 30% or higher can result.

**TERMINATION:**

Knots utilized should be determined by an expert, crimping should only be done at factory, and splices should only be performed and inspected by trained experts.

**PERFORMANCE:**

The 11.7mm/12mm Type A ropes mentioned in this information package have been CE marked in accordance with the EC directive 89/686/EEC Annex II and EN1891: (1998) as detailed in Technical File 007 Issue II rev E. These ropes are intended for static climbing and lowering applications only. Working loads and ultimate strengths apply only to new or like new ropes in good condition used under normal service, which have not been subjected to excessive wear or used in critical applications. Overloading of the rope is never recommended and can dramatically reduce a ropes capabilities and life.

Dynamic loading or shock loading the rope constitutes excessive wear and voids normal working loads, the rope should be retired. Instantaneous changes in load, up or down, in excess of 10% of the lines rated working load constitutes a hazardous shock load. Whenever a load is picked up, stopped or swung there is an increase in the force on the rope due to dynamic loading. The more sudden the change in load is, the greater the force put on the line is.

**MARKING:**

The CE accreditation is awarded after meeting the applicable technical standards described in the performance section. And having exhibited robust production processing and the Quality Assurance procedures necessary to ensure a reproducible process that includes traceability and in house testing.

EC Type – examination by: SGS United Kingdom Ltd., WESTON-SUPER-MARE, BS22 6WA UK (Notified Body No. 0120)

The ropes included in the CE standard have been marked at both ends in accordance with aforementioned standard with the following- the rope Type A, General Use, the diameter in millimeters, the European standard number, the last 2 digits of the year of manufacture, YALE and the batch or serial number of the rope.

An ID marker has also been utilized for CE and includes our name, the European standard number, the rope type, the year and quarter of manufacture and the materials that make up the rope.

**SHIPPING:**

No special packaging is necessary for transportation. Hanks should be bagged or boxed to prevent snags and maintain cleanliness and reels should receive standard wraps, covers or boxed as necessary.

**WARNING:**

**If in doubt of the ropes condition or previous usage retire the rope immediately. Not all damage to a rope is visible. A single shock load or a load over its rated working load can greatly reduce a ropes performance and result in damage, serious injury or death. Climbing is inherently dangerous and the improper use or selection of your equipment can be fatal. Only trained experts or users under the direction of an expert should be using these products. These ropes do conduct electricity especially when damp or wet. Avoid contact with all overhead cables and consult the local electrical authority for information.**

Product	11.7mm	12mm	
Test -	Typical results	Typical results	Typical results
Material	Polyester/NY	Polyester/NY	
Diameter (mm)	11.7	12mm	
Rope mass (g/m)	95	95	
Knotability	.9	1	
Static elongation %	3	3	
Static Strength kN	24.8	23.3	
Spliced Strength	28	27.5	
Knotted strength kN	17.6	19.3	
Fall Arrest Peak kN	5.5	5.4	
Dynamic Drops	5+	5+	
shrinkage	0	0	
Sleeve Core %	58/42	58/42	
Sheath Slippage	<4mm	<4mm	



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