



NEW ENGLAND ROPES

Performance Guaranteed.

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#### TACHYON

Tachyon meets or exceeds the life safety rope requirements of the European Standard for Personal Protective Equipment for the Prevention of Falls from Height, EN 1891:1998 Type A, for Low Stretch Kernmantle rescue/rappelling rope.

Tachyon is intended for use in rescue operation from above a victim or for rappelling. Tachyon is limited to low stretch, static situations. Should the risk of free fall arise, a dynamic rope is recommended for use; refer to EN892 for requirements.

While using Tachyon, anchoring points should always be above the user. The anchor point should have a minimum strength equal to that of the rope. Misuse of this product or use in conjunction with incorrect hardware and rappelling devices may cause serious injury or jeopardize the safety of the rescue operation.

New England Ropes recommends Tachyon be used with NFPA or CE approved hardware and related equipment. The hardware shall be suitable for the diameter of rope being used. If used in a fall arrest system, a full body harness is the only acceptable body holding device.

Tachyon should only be used by qualified personnel, or the user should be under the direct supervision of such a person, in life safety, rescue, and rappelling. Tachyon should be inspected after and prior to each use. Records must be kept that detail each use and the results of the inspections. It is recommended that the rope be used by the same person that maintains the history of that rope. Prior to any rescue operation, careful planning and situation analysis should take place to ensure safety.

This rope should not be used by anyone owning a medical condition affecting the user's strength, stamina, vision, sense of balance, respiration, or other human faculty, reasonably and normally required to undertake strenuous activity.



#### WARNING

It is essential for safety to verify the free space required beneath the user at the workplace before each occasion of use, so that, in case of a fall, there will be no collision with the ground or other obstacles in the fall path.

#### MARKINGS

**CE** indicates the rope has passed examination in accordance with EN1891:1998 and European Directive requirements.

**0120** is the number of the notified body in charge of annual control of manufactured PPE.

**Tachyon** is the brand name given by the manufacturer.

**A** indicates the Type; these ropes are designed to be used in rope access including all kinds of work positioning and restraint; in-line rescue, and speleology.

*Tachyon has been marked at both ends in accordance with the aforementioned standard with the following:*

- **CE**
- **The number of the notified body in charge of annual control of manufactured PPE**
- **Rope type (A)**
- **The diameter in millimeters**
- **The European standard number**
- **The last 2 digits of the year of manufacture**
- **New England Ropes Corp**
- **Serial number of the rope.**

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

*Check to make sure all product markings are legible. If markings are not legible, contact your local retailer or New England Ropes Corp.*

*The Notified Body who has done the EC Type examination is:*

Notified body for EC type Examination	
CE 0082	APAVE SUDEUROPE BP193 13322 MARSEILLE CEDEX 16 FRANCE
Notified body for production control under article 11B	
CE 0120	SGS UNITED KINGDOM Ltd 202B WORLE PARKWAY, WESTON-super-MARE, BS22 6WA UK

#### TERMINATING

Tachyon should be terminated by splicing the ends. Knots can decrease rope strength by as much as 60%. Use the manufacturers recommended splices for maximum efficiency. Other terminations, such as a figure 8 knot or bowline knot, can be used but their strength loss should be determined and not assumed. Systems using static kernmantle rope should incorporate reliable anchoring systems. Slack rope between the user and the anchoring point should be avoided due to the potential of injury.

Product Name	Tachyon
Actual Rope Diameter	11.2mm
Sheath Slippage	-3mm
Elongation	2.2%
Cover % of Mass	58.2%
Core % of Mass	41.8%
Mass/length	86.4 g/m
Static Strength $\geq$ 22kN w/o termination	28.7kN
Sheath Material	Polyester
Core Material	Nylon with Polypropylene sacrificial core
EN1891 Approved	Yes
Type	A
Shrinkage	0.3%

#### REMOVING ROPE FROM COILS AND REELS

Remove rope properly from coils or reels to prevent kinking.

- Uncoil from the inside as directed by the manufacturer.
- If on a reel, then the rope should be removed by pulling it off the top while the reel is free to rotate.
- To proceed in any other manner may cause kinks or hockels (strand distortion).
- If rope is cut to shorter lengths, then all markings must be repeated as on the original rope.

#### HANDLING ROPE

**Never stand in line with rope under tension. If a rope or attachment fails, it can recoil with sufficient force to cause physical injury. Synthetic rope has higher recoil/snapback tendencies than natural fiber rope.**

Reverse rope ends regularly, particularly when used in tackle. This permits even wearing and assures a longer useful life. When using tackle or slings, apply a steady even pull to get full strength from the rope.

#### OVERLOADING

**Do not overload rope. Sudden strains or shock loading can cause failure.**

Avoid sudden strains or shock loads which can exceed breaking strength. Shock loading can cause failure of a rope normally strong enough to handle the load.

Working loads are not applicable when rope is subject to significant dynamic loading. Whenever a load is picked up, stopped, moved, or swung, there is an increased force due to dynamic loading. The more rapidly or suddenly such actions occur, the greater this increase force will be. In extreme cases, the force put on the rope may be two, three, or even more times the normal load involved.



Examples could be picking up a tow on a slack line or using a rope to stop a falling object. Users should be aware that dynamic effects are greater on a low elongation rope such as manila than on a high-elongation rope such as nylon, and greater on shorter rope than on a longer one. Excessive dynamic loading of a high elongation rope is equally dangerous, because of stored energy which will cause the rope to recoil dangerously if it breaks. When a working load has been used to select a rope, the load must be handled slowly and smoothly to minimize dynamic effects and avoid exceeding the provision for them. If it is suspected that the rope has been shock loaded, then it should be retired.

#### LIFESPAN

**The operational lifetime of a rope depends on the intensity of use. It is difficult to give a precise lifetime because this depends on the environment where it is used. Certain environments considerably increase the amount of wear. Wear or damage could occur on the first use which reduces the lifetime of the product to that one single use.**

Avoid using a rope that shows signs of aging and wear. If in doubt, destroy the used rope. It is recommended that the user maintain a log of use for each rope, noting such things as shock loads, weights to which rope was subjected, number of uses, etc. This will help to determine when to retire the rope. The product should be inspected annually by a competent person authorized by the supplier.

No type of visual inspection can be guaranteed to determine accurately and precisely actual residual strength. When the fibers show wear in any given area, the rope should be downgraded or replaced.

Check the rope regularly for frayed strands and broken yarns. A pulled strand can snag on foreign objects during a rope operation. Check your rope carefully after each use for cuts, chaffing, hard spots, or any deterioration.

Both outer and inner rope fibers contribute to the strength of the rope. When either is worn, the rope is weakened. A heavily-used rope will often become compacted or hard which indicates reduced strength. The rope should be discarded if this condition exists.

#### ABRASION

**Avoid all abrasive conditions.**

Rope will be severely damaged if subjected to rough surfaces or sharp edges. Chocks, bits, winches, drums, and other surfaces must be kept in good condition and free of burrs and rust. Pulleys must be free to rotate and should be of proper size to avoid excessive wear. Restraining clamps and similar devices will damage and weaken the rope and should be used with extreme caution. Do not drag rope over rough ground. Dirt and grit picked up by the rope will work into the strands, cutting the inner fibers.

#### CHEMICALS

**Avoid chemical exposure.**

Rope is subject to damage by chemicals. Consult the

manufacturer for specific chemical exposure, such as solvents, acids, and alkalis. Consult the manufacturer for recommendations when a rope will be used where chemical exposure (either fumes, mist or actual contact) can occur.

#### STORAGE, CARE AND TRANSPORT OF ROPE

**Rope should be stored clean, dry, out of direct sunlight, and away from extreme heat.**

It is generally recommended that ropes be stored and transported in a rope bag designated for that use.

Cordage should be stored off the floor, on racks to provide ventilation underneath. Never store on a concrete or dirt floor, and under no circumstances should cordage and acid or alkalis be kept in the same area.

Do not store rope in direct sunlight. Synthetic rope (particularly polypropylene and polyethylene) may be severely weakened by prolonged exposure to ultraviolet (UV) rays. UV degradation is indicated by discoloration and the presence of broken filaments on the surface of the rope. Rope should be cleaned, to remove dirt or abrasive particles, in a mild detergent and cold water. Air dry out of direct sunlight. Washing can remove any coatings that may have been added to enhance the performance of the product.

#### HEAT

**Avoid overheating.**

Heat can seriously affect the strength of rope. When using rope where temperatures exceeding 140° F (or if it is too hot to hold), consult the manufacturer for recommendations as to the size and type of rope for the proposed continuous heat exposure conditions.

Friction from slippage causes localized overheating which can melt or fuse synthetic fibers or burn natural fibers, resulting in severe loss of tensile strength. If rope has been stored at elevated temperatures over a long period of time it can fail under loads below its rated breaking strength. If the user has any doubts concerning the strength of a rope, then the manufacturer should be contacted.



#### WARNING

**Heat can seriously affect the strength of synthetic ropes. The temperature at which 50% strength loss can occur in new and unused ropes is 350° F.**

#### FIRE AND FLAME

**Avoid fire and flame.**

Fire and flame impingement will seriously damage all synthetic rope. Damage may occur even if the temperature of the rope and fiber remains below the above listed temperature.



#### WARNING

- All synthetic rope under load will recoil if a fitting such as a chain, hook, cleat, bolt, pin, or ball-hitch and so forth should fail.
- The snapback action can propel the fitting and the rope causing serious injury to persons or property anywhere in the vicinity.
- Check all fittings, bolts, shackles, connectors, pins, mountings, splices, and so forth before using.
- Additional information on life safety rope can be found in the NFPA 1500, Standard on Fire Department Occupational Safety and Health Program, NFPA 1983, Standard of Life Safety Rope and Equipment for Emergency Services, and ASTM F 1740 Standard Guide for Inspection of Nylon, Polyester, or Nylon/Polyester Blend, or Both Kernmantle Rope.
- For the safety of the user, if the product is re-sold outside the original country of destination, the re-seller shall provide instructions for use, for maintenance, for periodic examination and for repair in the language of the country in which the product is to be used.

#### Equipment Record

Product:		
Model & Type/ Identification	Trade Name	Identification Number
Manufacturer	Address	Tel, fax, e-mail, and website
Year of Mfg, / Life expiry date	Purchase Date	Date first put into use

#### PERIODIC EXAMINATION AND REPAIR HISTORY

Date	Reason for entry (Examination or Repair)	Defects	Name & Signature of competent person	Periodic Examination Due Date