

EN1891 / Ropes meeting Type A or Type B

Type	A	A	A	A
Diameter in millimeters	11.1mm Super Static	10mm Safety Pro	10.5mm Safety Pro	11mm Safety Pro
Static strength	31.7kN	25.8 kN	27.2kN	32.4kN
Strength with figure eight knot	>15kN	>15kN	>15kN	>15kN
Number of factor 1 falls	>5	>5	>5	>5
Impact force factor 0.3	4.6kN	5.5kN	5.5kN	5.8kN
Elongation 50 / 150kg	2%	3.2%	3.5%	3%
Sheath slippage	0	0.3%	0.8%	0.6%
Weight per meter	87.6 grams per meter	62.5 grams per meter	70.4 grams per meter	76.6 grams per meter
Sheath percentage	47%	40.3%	46.6%	45.3%
Weight of the core	40.9 grams per meter	37.3 grams per meter	37.6 grams per meter	45.3 grams per meter
Shrinkage in water	0%	2.9%	2.5%	2.5%
Material	Polyamide	Polyamide	Polyamide	Polyamide

Type A: Rope used for caving, for rescue, and in rope access work. In the case of rope access work the rope is used to gain access to and from the work site, in conjunction with other equipment, and work positioning in tension and suspension on the rope. Type A ropes are more suitable for use in rope access and work positioning than Type B ropes.

Type B: Rope with a performance level inferior to ropes of type A. When using Type B ropes greater care will be required in protecting against the abrasion, cuts, general wear and tear etc., and when using Type B ropes great care should be taken to minimize the possibility of a fall.

Warning: This product has been manufactured specifically for rescue and/or work at height applications. These activities carry inherent risk. Therefore, only properly trained and experienced rope technicians should use this product. This rope is designed to be part of safety systems to aid in supporting personnel, fall restraint, or back up/belay systems. It is critical that you seek professional instruction on the proper use and handling of this product and all other equipment in any system employed.

Use Guidelines: Sterling Life Safety Rope Products are intended to be used as a link in a life safety chain. For rescue applications, careful consideration should be given before and during use of this product as to how any rescue could be safely and efficiently carried out.

You must understand safe working loads and the factors affecting system safety. The safe working load is the maximum load a rope is designed to sustain during normal use. Sterling lists the safe working load of the ropes based on a 10:1 component safety factor. System Safety Factor must be used when the rope is in use as knots & bends will weaken the rope and other equipment may affect the breaking strength of the rope. The system safety factor should take into account all components of the system.

The system must of necessity have a reliable anchor point, at the same height or above the user. All slack in the rope between the user and the anchor point must be avoided. These ropes are not designed for lead climbing. A Sterling dynamic rope meeting the requirements of UIAA 101/EN 892 should be used if there is potential for generating high impact forces.

System Components: All products used in conjunction with the rope in a fall arrest or rescue system must be compatible with the type of rope, its diameter and should comply with the respective EN standards for its use. All System Components must also be checked according to the manufacturers recommendations with each use and be free of damage, excessive wear or burrs.

Terminations: The recommended knot for tying-on is a well-lightened figure eight knot. Do not use a karabiner for tying-in if there is a risk of a fall. Terminations may be made at any point along the rope with a figure eight loop. The minimum length of rope that must extend from both sides of each such knot is 10cm.

If the rope is cut into a number of lengths, repeat and affix to each new end the markings of the original ends.

Effects of Chemicals: Harsh chemicals, in particular sulphuric acid (found in car batteries) attack the ropes plastic filaments and can dissolve them. This damage can be invisible to the naked eye, making it especially dangerous. In the instance of contamination, sheath discoloration may be imperceptible even though the core of the cord has been destroyed. It is difficult to estimate the potential damage of chemical contamination; therefore never store your cord near chemicals. If chemical contamination is suspected retire the rope immediately.

Cleaning: Wash in warm to hot water with a mild soap (such as Sterling's Wicked Good Rope Wash), rinse thoroughly and hang to dry in shade. Do not put in a dryer. Disinfect using only materials that have no effect on the synthetic materials used.

Sharp Edges: The rope must be protected against sharp edges or anything that may cut the rope, internally or externally.

Storage and Transporting: Store your ropes in a dry, dark and cool place. Transport in a rope bag or backpack. Protect from direct sunlight, chemicals, heat, and mechanical damage.

Replacement Criteria: Ropes may be subject to irreparable damage during the first use. The rope must be retired immediately if any of the following are evident: excessive fraying, softness or stiffness; exposed cores; damage due to glazing or hard spots; or any lack of uniformity in diameter, color, texture. These ropes should be retired if they are exposed to excessive heat or are exposed to moderate heat levels on a consistent basis. Significant strength loss can occur at temperatures lower than the fiber melting points: 350F for nylon and polyester. Retire the rope if it has been subjected to a shock load, excessive loading, or it has come in contact with any type of harmful chemicals.

Service Life: The working life of your rope depends upon the frequency and type of use. These are approximate timelines for average and proper use of rope products.

- Extensive and/or weekly use: 3 to 6 months
- Occasional Use: 1-2 Years
- Seldom Use: 2-5 years

Shelf Life: The shelf life of any Sterling Rope Life Safety Rope or Cord Product in unused condition, stored properly in an environment not exposed to sunlight or hazardous materials will be a maximum of 10 years, with a maximum use life of 5 years. Actual working life of a rope should not exceed 5 years, if used, stored and cared for properly. The combined storage and usage lifetime must never exceed 10 years.

These care instructions are intended to be a guide for use and retirement for ropes that meet the following criteria:

□ Escape, including:
- Ropes used in Emergency Egress

□ Life Safety, including:
- NFPA General Use
- NFPA Light Use
- Ropes used in life support

□ Throwing, including:
- WaterLine
- GrabLine
- UltraLine
- Floating ropes used in water rescue

□ EN1891, including:
- Ropes meeting Type A or Type B



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ESCAPE / Ropes used in Emergency Egress

Escape: Personal escape rope designed for immediate self-rescue of an emergency services person from a life-threatening emergency situation above ground. It is designed as a one-time use rope only and is only to be used with a life safety harness or escape belt that complies with relevant NFPA/EN standards.

Warning: This product has been manufactured specifically as a one-time use personal escape rope for self-rescue. There are inherent risks involved with any situation requiring emergency rescue. Therefore, only personnel properly trained in self-rescue should use this product. It is critical that you seek professional instruction on the proper use and handling of this product and all other equipment in any system employed.

Use Guidelines: Sterling Escape Ropes are intended to be used as one-time use ropes for self-rescue. For emergency self-rescue careful consideration should be given before and during the use of this product as to how any self-rescue can be safely and efficiently carried out.

You must understand safe working loads and the factors affecting system safety. The safe working load is the maximum load a rope is designed to sustain during normal use. Sterling lists the safe working load of the ropes based on a 10:1 component safety factor. System Safety Factor must be used when the rope is in use as knots & bends will weaken the rope and other equipment may affect the breaking strength of the rope. The system safety factor should take into account all components of the system.

The system must have a reliable anchor point, at the same height or above the user. All slack in the rope between the user and the anchor point must be avoided.

These ropes are not designed for lead climbing. A Sterling dynamic rope meeting the requirements of UIAA 101/EN 892 should be used if there is potential for generating high impact forces.

System Components: All products used in conjunction with the rope in a rescue system must be compatible with the type of rope, its diameter and should comply with the respective NFPA/EN standards for its use. All System Components must also be checked according to the manufacturers instructions for their use and be free of damage, excessive wear or burrs.

Terminations: The recommended knot for forming a termination is a well-tightened figure eight knot. Terminations may be made at any point along the rope with a figure eight loop. The minimum length of rope that must extend from both sides of each such knot is 10cm.

*Escape ropes that are strictly being used in training situations may follow the life safety criteria for retirement and service life.

LIFE SAFETY / Ropes used in life support situations

Classes of protection

General Use Life Safety: Life Safety Rope designed for general use, light use, and personal escape based on design loads (2,77kN/600lbs) and performance requirements. Ropes were designed solely for the purpose of supporting people during rescue, fire-fighting, emergency operations, rope access, or during training evolutions.

Light Use Life Safety: Life Safety Rope designed for light use loads, and personal escape based on design loads (1,33kN/300lbs) and performance requirements. Ropes were designed solely for the purpose of supporting people during rescue, fire-fighting, emergency operations, rope access, or during training evolutions. Light Use Life Safety rope performance is inferior to that of General Use Life Safety rope and greater care will be required in protecting against the abrasion, cuts, general wear and tear, etc.

Warning: Products rated for Life Safety/Use have been manufactured specifically for rescue and/or work at height applications. These activities carry inherent risk. Therefore, only personnel properly trained and experienced rope technicians should use this product. It is critical that you seek professional instruction on the proper use and handling of this product and all other equipment in any system employed.

Use Guidelines: Sterling Life Safety Rope Products are intended to be used as a link in a life safety chain. For rescue applications, careful consideration should be given before and during use of this product as to how any rescue could be safely and efficiently carried out.

You must understand safe working loads and the factors affecting system safety. The safe working load is the maximum load a rope is designed to sustain during normal use. Sterling lists the safe working load of the ropes based on a 10:1 component safety factor. System Safety Factor must be used when the rope is in use as knots & bends will weaken the rope and other

equipment may affect the breaking strength of the rope. The system safety factor should take into account all components of the system.

Effects of Chemicals: Harsh chemicals, in particular sulphuric acid (found in car batteries) attack the ropes filaments and can dissolve them. This damage can be invisible to the naked eye, making it especially dangerous. In the instance of contamination, sheath discoloration may be imperceptible even though the core of the cord has been destroyed. It is difficult to estimate the potential damage of chemical contamination; therefore never store your cord near chemicals. If chemical contamination is suspected retire the rope immediately.

Cleaning: Wash in warm to hot water with a mild soap, rinse thoroughly and hang to dry in shade. Do not put in a dryer. Disinfect using only materials that have no effect on the synthetic materials used. For rope with Aramid fibers it is important to dry thoroughly. Aramid fiber ropes should not be allowed to remain wet for long periods of time.

Sharp Edges: The rope must be protected against sharp edges or anything that may cut the rope, internally or externally.

Storage and Transporting: Store your ropes in a dry, dark and cool place. Transport in a rope bag or backpack. Protect from direct sunlight, chemicals, heat, and mechanical damage.

***Replacement Criteria:** Escape ropes are designed for one time use in emergency situations. However ropes may frequently be exposed to elevated heat levels in fire fighting situations without ever being used. Strength loss may occur with frequent exposure to moderate temperatures. Significant strength loss begins to occur around 350f for nylon and polyester fibers and 500f for Aramid fibers. Indications that your escape rope has lost strength include but are not limited to stiffness, glazing, and discoloration. If you have any question about the integrity of your escape rope or suspect strength loss because of exposure to heat retire immediately.

***Service Life:** This is a one-time use rope for emergency self-rescue.

Shelf Life: The shelf life of any Sterling Rope Life Safety Rope or Cord Product in unused condition, stored properly in an environment not exposed to sunlight or hazardous materials will be a maximum of 10 years. If there is any question regarding the use, history, condition or integrity of your rope, retire it.

The system must of necessity have a reliable anchor point, at the same height or above the user. All slack in the rope between the user and the anchor point must be avoided.

These ropes are not designed for lead climbing. A Sterling dynamic rope meeting the requirements of UIAA 101/EN 892 should be used if there is potential for generating high impact forces.

System Components: All products used in conjunction with the rope in a fall arrest or rescue system must be compatible with the type of rope, its diameter and should comply with the respective NFPA/EN standards for its use. All System Components must also be checked according to the manufacturers recommendations with each use and be free of damage, excessive wear or burrs.

Terminations: The recommended knot for tying-on is a well-tightened figure eight knot. Do not use a karabiner for tying-in if there is a risk of a fall. Terminations may be made at any point along the rope with a figure eight loop. The minimum length of rope that must extend from both sides of each such knot is 10cm.

If the rope is cut into a number of lengths, repeat and affix to each new end the markings of the original ends.

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THROWLINE / Floating ropes used in water rescue

Throwline: A floating rope that is intended to be thrown to a person during water rescues or as a tether for rescuers entering the water. Throwlines are not designed to be used for rope access, personal escape, firefighting, or any work at height applications, and should only be used for water rescue applications.

Warning: This product has been manufactured specifically as a water rescue rope. There are inherent risks involved in any situation involving water rescue. Therefore, only personnel properly trained in water rescue should use this product. It is critical that you seek professional instruction on the proper use and handling of this product and all other equipment in any system employed.

Use Guidelines: Sterling Throwlines are intended to be used as a tether for rescuers or thrown to a person during emergency water rescue situations. For emergency water-rescue careful consideration should be given before and during the use of this product as to how any water-rescue can be safely and efficiently carried out. Throwlines must not be used in any vertical rescue system, rappelling activity, or work at height application.

System Components: All products used in conjunction with the rope in a rescue system must be compatible with the type of rope, its diameter and should comply with the respective NFPA/EN standards for its use. All System Components must also be checked according to the manufacturers recommendations with each use and be free of damage, excessive wear or burrs.

Terminations: The recommended knot for forming a termination is a well-tightened figure eight knot. Terminations may be made at any point along the rope with a figure eight loop. The minimum length of rope that must extend from both sides of each such knot is 10cm.

If the rope is cut into a number of lengths, repeat and affix to each new end the markings of the original ends.

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Cleaning: Wash in warm to hot water with a mild soap (such as Sterling's Wicked Good Rope Wash), rinse thoroughly and hang to dry in shade. Do not put in a dryer or disinfect using only materials that have no effect on the synthetic materials used.

Sharp Edges: The rope must be protected against sharp edges or anything that may cut the rope, internally or externally.

Storage and Transporting: Store your ropes in a dry, dark and cool place. Transport in a rope bag or backpack. Protect from direct sunlight, chemicals, heat, and mechanical damage.

Replacement Criteria: Ropes may be subject to irreparable damage during the first use. The rope must be retired immediately if any of the following are evident: excessive fraying, softness or stiffness; exposed cores; damage due to glazing or hard spots; or any lack of uniformity in diameter, color, texture. These ropes should be retired if they are exposed to excessive heat or are exposed to moderate heat levels on a consistent basis. Significant strength loss can occur at temperatures lower than the fiber melting point 350f for nylon and polyester. Retire the rope if it has been subjected to a shock load, excessive loading, or it has come in contact with any type of harmful chemicals.

Service Life: The working life of your rope depends upon the frequency and type of use. These are approximate timelines for average and proper use of rope products.

- Extensive and/or weekly use: 3 to 6 months
- Occasional Use: 1-2 Years
- Seldom Use: 2-5 years

Shelf Life: The shelf life of any Sterling Rope Life Safety Rope or Cord Product in unused condition, stored properly in an environment not exposed to sunlight or hazardous materials will be a maximum of 10 years.

Cleaning: Wash in warm water with a mild soap, rinse thoroughly and hang to dry in shade. Do not put in a dryer. Disinfect using only materials that have no effect on the synthetic materials used.

Sharp Edges: The rope must be protected against sharp edges or anything that may cut the rope, internally or externally.

Replacement Criteria: Ropes may be subject to irreparable damage during the first use. The rope must be retired immediately if any of the following are evident: excessive fraying, softness or stiffness; exposed cores; damage due to glazing or hard spots; or any lack of uniformity in diameter, color, texture. Retire the rope if it has been subjected to a shock load, excessive loading, or it has come in contact with any type of harmful chemicals.

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Service Life: The working life of your rope depends upon the frequency and type of use. These are approximate timelines for average and proper use of rope products.

- Extensive and/or weekly use: 3 to 6 months
- Occasional Use: 1-2 Years
- Seldom Use: 2-5 Years

Shelf Life: The shelf life of any Sterling Rope Throwline in unused condition, stored properly in an environment not exposed to sunlight or hazardous materials will be a maximum of 10 years, with a maximum use life of 5 years. Actual working life of a rope should not exceed 5 years, if used, stored and cared for properly. The combined storage and usage lifetime must never exceed 10 years.

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If there is any question regarding the use, history, condition or integrity of your rope, retire it. Contact a Sterling Rope Representative with any questions or visit our website at www.sterlingrope.com.