

Redefining Rope Technologies

PEGASUS cores are all designed with *Innegra™S*, a *new and innovative advanced fiber* that gives Pegasus Ropes® the same physical & mechanical properties – whether wet, dry or even exposed to chemicals. This *breakthrough technology* has an impressive strength-to-weight ratio, making it the lightest structural fiber available today. Innegra™'s unique composition also provides great thermal properties when used in hot or cold environments. For the first time you can be confident that the backbone of your rope's system,

your core, will perform regardless of environmental challenges.

HARNESSING THE ADVANTAGE OF THE ADVANTAG

- ✓ Ultra-lightweight
- ✓ High Strength
- ✓ Hydrophobic
- *∨* UV Stable
- Chemically Inert
- ✓ Cut Resistant
- ✓ Low Creep
- **▶** Buoyant
- ✓ Low Dielectric

North American Rescue® (NAR®) is proud to announce our **Static Pegasus Ropes® Series – the lightest weight and most versatile rope available today**. Understanding your mission requirements, NAR® continues our tradition of providing tactical and rescue teams with innovative and dependable equipment that outperforms expectations in unpredictable environments.

Our Pegasus Ropes® line delivers unmatched performance (wet, dry or contaminated), allowing you to utilize one rope for most missions.

Pegasus cores are composed of 100% virgin Innegra™ fiber. Innegra™ is a new, advanced material with excellent physical & mechanical properties. Characterized by its **excellent strength to weight ratio**, Innegra™S delivers a very strong, ultra-lightweight, hydrophobic, buoyant and chemically inert fiber that is **ideal for varying operational needs.**

Unlike all nylon based ropes, Pegasus' physical and mechanical properties are virtually unchanged regardless of environmental conditions such as rain, sleet, snow, mist, humidity, salt water and chemicals, allowing it to maintain its high strength, low weight and cut resistance regardless of the weather. With it's superior handling, knotability and reliably stable performance, **Pegasus is**

a significant advancement in rope technologies.

The Factor of Safety (FOS) in the rope industry recommends a 10x FOS for most rope designs

(working load = 10% of Minimum Break Strength) compared to the automotive, aerospace, and structural design industries' 2-3x. In part, the high rope FOS tries to compensate for the environmental, mechanical and physical "unknowns" that rope materials are exposed to.

Understanding Ropes vs Environment

GENERAL EFFECTS of **WATER** or **ELEVATED HUMIDITY** on **NYLON***

Nylons absorb a significant amount of water/moisture, whether by immersion or, perhaps surprisingly, by simple exposure to elevated humidity for even a relatively short period of time. Once moisture enters these fibers, they never return to 100% strength or original quality. To the right are some mechanical and physical properties that are negatively affected by moisture.

NEGATIVE EFFECTS of **MOISTURE** on many **FIBERS**

- ↓ Strength Loss (up to 70%)
- **↓** Dynamic **Performance**
- **↓** Fall Arrest Peak Force
- **↓** Knotability
- ↓ Melting Point

- **↓** Abrasion **Properties**
- † Elongation
- † Weight Gain (6%-9%)
- ↑ Sheath Slippage
- † Diameter

The chart below illustrates the various strengths and weaknesses of available rope fibers. Note that the properties highlighted in blue are testing results with water/moisture taken into consideration. Current testing protocols are all conducted in a laboratory environment with controlled humidity and temperature. Understanding the environments that you work in, we believe that **water/moisture is a major** factor that needs to be considered. Unfortunately, operational conditions are not predictable or controllable. Pegasus Ropes® use NFPA/UIAA testing standards in addition to tests conducted under full humidified/wet conditions.

Rope Fiber Characteristics

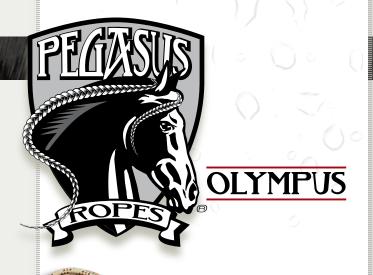
PROPERTY	Innegra™S	Polypropylene	Polyester	Nylon 6	Dyneema	Technora
Cost per lb	Good	Excellent	Excellent	Excellent	Poor	Poor
Specific Gravity g/cc (weight)	0.84	0.91	1.38	1.14	0.97	1.44
Breaking Tenacity gF/denier (dry)	9.5	3.0	9.3	9.0	38.0	23.0
Moisture Regain	Excellent	Excellent	Good	Poor	Excellent	Poor
Water Resistances	Excellent	Excellent	Excellent	Poor	Excellent	Poor
Strength Retention in H ₂ O	Excellent	Excellent	Good	Poor	Excellent	Good
Elongation at Break % (dry)	9.5	19.0	14.6	20.0	3.1	3.5
Melting Point (C/F)	162/324	162/325	256/493	254/489	147/297	427/800
Abrasion Resistance (dry)	Good	Poor	Good	Good	Good	Excellent
Abrasion Resistance (wet)	Good	Poor	Good	Poor	Good	Good
UV Resistance	Good	Poor	Good	Good	Good	Poor
Knotability	Excellent	Excellent	Excellent	Excellent	Poor	Good
Chemical Resistance: ACID	Excellent	Excellent	Excellent	Poor	Excellent	Excellent
Chemical Resistance: ALKALI	Excellent	Excellent	Poor	Good	Excellent	Good
Chemical Resistance: ORGANIC SOLVENT	Excellent	Excellent	Good	Good	Good	Good

The Rope Fiber Characteristic chart is a homogenized view of fiber characteristics. Many factors can alter performance of materials.

"AMILAN* Nylon Resin." Mechanical Properties | AMILAN* | Plastics Products | TORAY. Toray Industries Inc., n.d. Web. 08 Oct. 2013.

Note: Para-Aramid (Kevlar, Nomex, Technora) are hydrophilic (water absorbing) have the same general properties when moisture enters the fiber.

^{*}Sterling Rope Company's "Guide to Rope Engineering, Design and Use, (Flory, McKenna, Parsey, 1982) (UT Knoxville (Raghavendra R. Hegde, Atul Dahiya, M. G. Kamath (Monika Kannadaguli and Ramaiah Kotra April, 2004)





Diameter:	9.5mm
Weight:	3.82 lb per 100 ft
Elongation:	1.6%
Rope MBS (Dry Break)	5495 lbf (24.4 kN)
Fibers (core/sheath):	Innegra™/Technora
Sheath Ratio:	62% Technora
Gold w/Black & Red Runner	
Item# 90-1401	100 ft.
Item# 90-2401	200 ft.
Item# 90-3401	300 ft.

NOTE: Testing conducted by 3rd party UL Rated Laboratories.

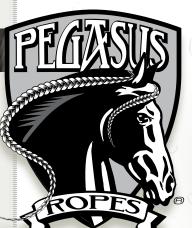
STRENGTH that DEFIES GRAVITY

Olympus Series™ Canyoneering, mountaineering and caving represent some of the most challenging and abusive environments for safety equipment on the planet. NAR^v has designed a line of durable, lightweight and great handling ropes that offer reliability in all weather conditions. Whether it's raining, submerged in salt water or -40°F, Pegasus Ropes® always perform. Olympus is **engineered for rough terrain and sharp edges** by offering a thick and highly twisted Technora sheath for added strength and excellent abrasion resistance. The Innegra™ core is ultra-lightweight and strong, allowing the rope to have a **dependable core that is so buoyant that it floats** with the thicker sheath. Combining these two high performance fibers creates the ultimate in advanced rope performance.

- Technora sheath for abrasion, cut resistance & heat resistance
- Innegra™ core for reliable strength, durability
 & flotation whether wet, dry or contaminated
- · Easy to knot with a great feel
- · Easily stored and deployed from stuffed sack
- Low stretch wet or dry
- · High strength to weight ratio wet or dry







STRENGTH that DEFIES GRAVITY

HAVOC ASSAULT ROPES

Wreak
Havoc with
Confidence!

Diameter:	9.5mm
Weight:	3.80 lb per 100 ft
Elongation:	3.5%
Rope MBS:	
Fibers (core/sheath):	Innegra™/Technora
Sheath Ratio:	54% Technora
Tan w/ Red Runner	
Item# 90-0450	50 ft.
Item# 90-0475	75 ft.
Item# 90-1005	100 ft.
Item# 90-1505	150 ft.
Item# 90-2005	200 ft.

Item# 90-3005.....

Item# 90-6605.....

Diameter:	8mm
Weight:	2.9 lb per 100 ft
Elongation:	3.58%
Rope MBS:	5615 lbf (24.4 kN)
Fibers (core/sheath):	Innegra™/Technora
Sheath Ratio:	52.5% Technora

Tan	
Item# 90-8501	50 ft
Item# 90-0403	75 ft
Item# 90-1402	100 ft
Item# 90-0404	150 ft
Item# 90-2402	200 ft
Item# 90-3402	300 ft
Item# 90-6402	660 ft

300 ft.

HAVOC Assault Rope Series

The Operationally Unparalleled *HAVOC Assault Rope Series* is the foundation of North American Rescue's *Vertical Access, Extraction, & Evacuation* Systems.

The Synergistic Innovation of the *HAVOC Assault Rope Series* emerges from the pairing of 2 uniquely robust Fibers, Meticulously Engineered and Manufactured, to forge ropes with *unmatched Capabilities & Resilience* – capable of countering the harshest environmental pathologies found in full-spectrum vertical responses.

NAR® & **EDELRID**, the industry leader with 150 years of experience in rope manufacturing, have joined forces with multi-disciplinary vertical specialists to innovate **the most tenacious small diameter ropes on the market today** – engineered to counter the most severe environmental pathologies found throughout full spectrum operations... whether at work or at play.

The unique material selection & engineering of the HAVOC core, specifically the *Innegra™ Braided Fiber Core Integration*, provides *superior durability, low cyclic fatigue* properties, an *extremely low specific gravity* and structural weight, *superior resistance to the harshest contaminates* (acids, bases, and organic solvents), and unrivaled cut-resistance. The novel tensioning and fiber refinement techniques utilized within the 16-carrier *12-braid Innegra™ core amplifies its overall robustness* and *resilience* providing an operational rope which acts as a countermeasure to anticipated environmental challenges.

The specialized core of the NAR *HAVOC Assault Rope Series* is protected by a higher density, precision double braided Technora sheath to synergistically interface with the core for *optimized strength*, *elongation*, *decreased creep*, *heat resistance*, and *operational safety*. To reinforce and exceed the *abrasion resistance*, *cut resistance*, and *overall durability*, of other competitive ropes, the HAVOC Rope Series strategically bulked up the sheath percentage of each rope while maintaining a tightly weaved snag-free exterior cover.

Special Features:

Innegra™

- Innegra™ Lightest Weight Structural Fiber on the market for an extremely Low Specific Gravity
- Hydrophobic
- · Resistant to Harsh Contaminants & Chemicals
- · Low Flex Fatigue
- Superior Durability
- · Extremely High Cut Resistance

Technora® Sheath

- · Resistant to Cuts, Abrasion & Heat
- · Optimized Strength
- Decreased Creep
- · Increased Durability & Safety

Innovative Synergy of 2
unique Fibers engineered
for unmatched Confidence
& Resilience from Ropes in
Challenging Environments...



52.5% Technora® Sheath (8mm) 7 54% Technora® Sheath (9.5mm)





Lightweight, multiple use casualty evacuation system enabling first responders/medical providers to ascend, descend, hoist & lower both rescuer and casualty to safety so that patient care may be continued.

- Combines 150 ft of lightweight durable 9.5 mm Olympus Pegasus Rope® with the latest. in lightweight multipurpose hardware all in a super compact storage platform.
- Capable of rigging 2:1, 3:1, 4:1, 5:1, 6:1, and 9:1 systems in different configurations for a wide variety of rescuer options.
- Nylon bag features bottom zipper hardware pouch with 6 MOLLE/PALS loops for hardware organization and 4 elastic loops for stowing straps, anchor and foot loops.
- · Front pocket allows for optional storage of helmet and rope guard.
- · Rope compartment features two-bar-tacked internal webbing loops for rope ends.
- Carriage options include 4 Point, D-ring configurable modified side and/or backpack carrystyle adjustable strap.



































Kit Dimensions:

L 11 in. x W 4.5 in. x D 4 in.

Wt: 2 lb 8 oz

Belt Throw Bag

90-0065



Water Rescue

Belt Throw Bag

A multipurpose water rescue solution designed for easy deployment and retrieval for rescuers.

- The guick release reverse tapered throwbag holds 60 ft of 7.5 mm Triton Pegasus Rope® rated at over 3,300 lb.
- Kit's reverse tapered design allows for rapid packing of the Triton rope and a slim profile for users.
- The adjustable belt features 2 in. quick release strap, 1.5 in. plastic cam buckle and red toggle ball for easy ID and throwbag release during water rescue work or paddling.
- Configured with pre-tied Figure 8 knots on both rope ends to maximize working load of rope.
- Kit also features a cinch top with 550 Cord, plastic cordloc and hook-and-loop top flap, 2 front gear storage pockets as well as a foam backpad for comfort and bag flotation.

Rescue Pegasus Rope® Kits 50 ft Throw Bag

A must-have necessity for water rescue.

- Durable, easy-to-use rescue device with a highly visible orange nylon bag and mesh panels that drain quickly for use in multiple rescue operations.
- Packed with 50 ft of 7.5 mm Triton Pegasus Rope® rated at 3,300 lb.
- Triton rope is strong enough for multiple uses: as a throw line, tension diagonal, tow line and for pinned kayak recovery.



Rescue Gear & Accessories



- · Can be used as a rope ascender or a progress capture device in a hauling system
- Automatic system presses the carabiner against the rope to start the braking action on the rope in any position
- Ultra-light (35 g) and very compact: the ascender can be carried permanently on the harness or in a pack
- Stainless steel cam with angled teeth and self-cleaning slot securely grips the rope, even in muddy or icy conditions

Dimensions:	TiBloc	C€	
Rope Size: 8 to 11 mm	Item#	NSN#	
Wt: 39 g	ZZ-0547		



Petzl® **Basic** Ascender

- Compact ascender with excellent grip for rope ascent on a fixed line or as progress capture in a hauling system.
- · Toothed cam with self-cleaning slot optimizes performance under any conditions (e.g. frozen or dirty ropes).
- Stainless steel cam has better resistance to corrosion.
- Lower attachment hole large enough for two carabiners (lanyard and foot loop).
- Unner connection hale for guiding the rope

opper connection mote for golding the ic			
	Basic Ascender	C	
8 to 11 mm	Item#	NSN#	
Wt: 85 g	ZZ-0554	9	



Petzl® GRIGRI 2 Belay Device

- Compact, ultra-light belay device allowing excellent control during the descent with assisted braking capability on all single dynamic 8.9 to 11 mm rope.
- Enables one hand to hold the rope while the other utilizes the patented handle to unlock the cam for a gradual, controlled release of the rope
- Ensures added security when lowering a partner or rappelling.
- Features aluminum side plates, stainless steel cam and friction plate, reinforced nylon handle.

Dimensions:	GRIGRI 2		
Rope Size: 8 to 11 mm	ltem#	NSN#	
Wt: 170 g	ZZ-0545		



- Ultra-light, multi-purpose, hot-forged aluminum belay/rappel device that regulates the amount of braking friction on the rope according to its diameter and condition
- Reverso mode. V-shaped friction channels with asymmetrical lateral grooves adapt the friction to the type of rope for better control
- Reverso mode for belaying one or two seconds with assisted braking

Dimensions:

Rope Size: Half Ropes & Twin Ropes - ≥ 7.5 mm Single Ropes - ≥ 8.9 mm

Wt: 59 g

REVERSO 4

ZZ-0546



TriRig ϵ

ZZ-0553

Rock Exotica® TriRig Rigging Plate

For easy organization of the work area and for creating multiple anchor systems

- 19 mm holes allow the locking sleeves of most carabiners to pass through
- Aluminum construction with excellent strength-to-weight ratio

Dimensions: Breaking strength: 36 kN

Wt: 51 g



screw, machined side plates and integrated axle

Stronger, compact, snagfree profile efficiency.

Mini-Machined Pulley C€



Dimensions: Rope Size: up to 11 mm

Wt: 83 g



Rock Exotica® rockD Carabiner

- Narrow asymmetric "D" shape machined frame carabiner
- Snag resistant key lock nose
- Large ergonomic angled gate opening

Gate opening: 24 mm

Wt: 73 g

 ϵ rockD

ZZ-0543

ZZ-0548

Petzl® **Footape** Adjustable Foot Loop

- Adjustable nylon foot loop for attachment to the BASIC rope clamp for rope ascents.
- Underfoot strap is abrasionresistant & slightly rigid to make it easier to step into.
- Adjustable elastic keeps the foot in the foot loop with any type of shoe.

 Mini DoubleBack buckle easily & quickly adjusts length of foot loop. Dimensions: Wt: 65g

Petzl® Footape

Item# NSN# ZZ-0551





Dimensions: Breaking strength: 22 kN **Width:** 19 mm

L 60 cm Wt: 58 g **L 120 cm Wt:** 98 g Polyester sling to set up a belay or an anchor, or to extend an anchor point.

Size	ltem#	NSN#
60 cm	ZZ-0549	
120 cm	ZZ-0550	

Gear & Accessories Rescue



- Ring Sealed construction Waterproof to 1M for 1 Hr
- Includes (2) 1.5V "AAA" batteries providing maximum light output throughout battery life
- Up to 6 hrs, runtime on high mode; up to 24 hrs. on low mode
- Impact resistant ABS housing drop test verified
- Solid State Power Regulation provides maximum light output throughout battery life
- Shatter resistant polycarbonate lens

NAR® Headlamp

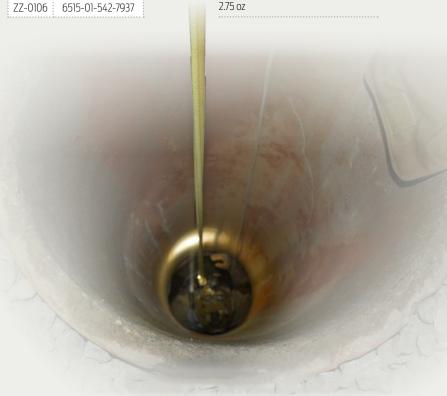
 Item#
 NSN#

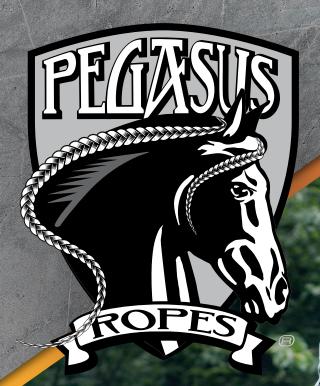
 ZZ-0106
 6515-01-542-7937

Device Dimensions: Faceshield diameter - 1.3 in.

Headlight (including head strap & mounting plate) - W 2.25 in. x D 1.6 in.

Wt: (including batteries & headband)





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PRODUCTS
WITHA MISSION

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