

Honeywell and Puget Sound Rope Go the Distance for Off-road Sports

Plasma® 12-Strand Rope Featuring Spectra® Fiber Emerges as the Synthetic High-Performance Winch Line of Choice

When adventurous off-roaders get themselves and their vehicles stuck in a deep gully, on a steep slope, or in a similar bind, a winch carrying a strong, lightweight rope is the only logical solution. More often than not, the rope on that winch is Plasma® 12 x 12-strand rope from Puget Sound Rope that incorporates Spectra® fiber from Honeywell – a super strong synthetic fiber commonly found in military armor.

Winch Events Require More than Nerves of Steel

Winches and the load-bearing lines that they carry are the most indispensable assets of participants in off-road events. Ill-equipped vehicles quickly become immobilized with burned-out drive shafts, busted CV joints and broken lines. Historically, winch lines have been tensile steel wire cables that, while effective, have presented users with a host of problems due to their weight, design and other properties. When deploying a winch during an event, competitors must first walk the winch line uphill or over difficult terrain to find an appropriate anchor point. If that line is steel wire cable, it is extremely heavy (a typical 150-foot length of steel cable can easily weigh 50 pounds) and can place tremendous burden on the navigator or co-driver tasked with anchoring the line, not to mention the vehicle's front axle.

Apart from the weight burden, steel cables can break, posing a threat to observers of this extreme sport. Steel cables that snap under tension can have a whipping action that can strike and cause severe injury to anyone in its path. Other drawbacks of steel cable that have caused headaches for winch events participants include wear and tear that results in kinking, frayed wire and compression damage. To remedy these problems, winch event participants in recent years have turned to synthetic ropes and moved away from heavier and often dangerous steel lines.

Stronger Than Steel

Off-roaders now turn to the Plasma® 12 x 12-strand rope, a braided, high performance, synthetic rope designed and manufactured by Puget Sound Rope that has a number of advantages over steel cable that make it far safer and easier to use than the equivalent steel rope. Plasma uses Spectra fiber, as well as other products and technologies, to gain incredible strength and other attributes. Spectra fiber has the highest strength-to-weight ratio of any synthetic fiber, a Plasma rope being 7 to 10 times lighter than a steel rope of equivalent size and strength.

The light weight and flexibility of Plasma makes it much easier for the recovery person to lug the rope up a hill or across terrain.

Safety is also a big plus for Plasma rope. Plasma's strands are braided rather than wound like wire cable. Plasma rope under strain has only a fraction of the torsional energy build up that steel cable has under the equivalent strain. If Plasma rope does become overloaded and breakage occurs, the rope has a tendency to simply drop to the ground instead of recoiling towards the vehicle or observers, although with all extreme sports appropriate caution should be taken at all times. Plasma rope also displays improved resistance to abrasion – the sort of wear and tear that causes steel cable to kink, splinter and fray, as well as become damaged from compression.

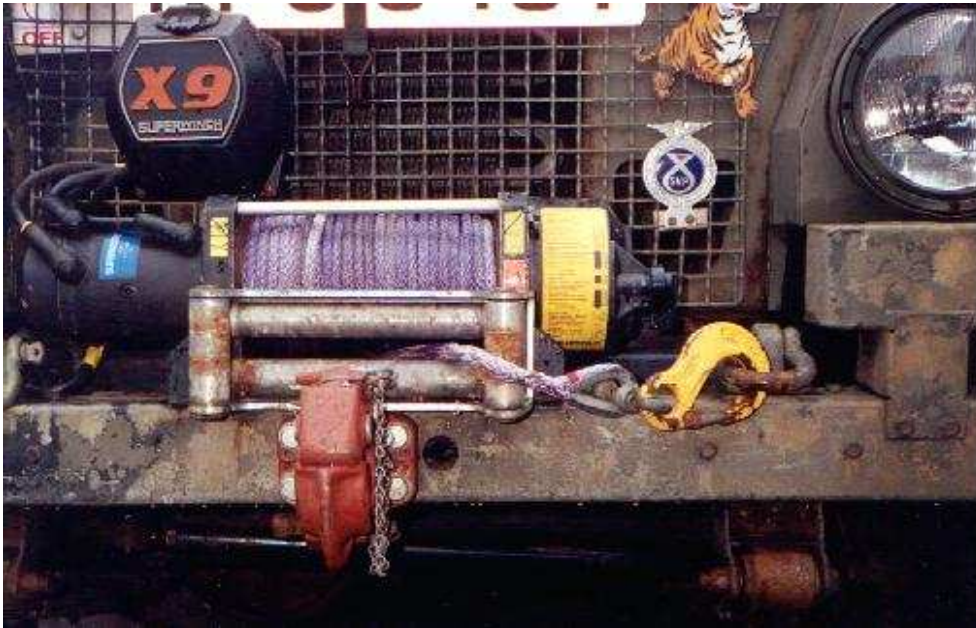
Other Spectra applications include use in extreme sport climbing and high-tech sailcloth composites for America's Cup sailboats. In addition, Puget Sound Rope and Honeywell have been working together for years to provide innovative solutions based on high-performance Spectra-based rope that replace the use of steel cable in extreme sports.

Plasma Rope Steps Up in Scotland

Since Plasma's introduction at winch events nearly five years ago, its use has become a fixture. In fact, "Plasma" has become the generic term in the sport for high-performance synthetic rope. Some even estimate that as much as 90 percent of winch events participants now use Plasma.

Most recently, Plasma proved its worth at Scotland's 2005 Argyll Forest Challenge, one of the newest and most highly regarded winch challenges in the world. Sponsored and organized by European Plasma distributor Rufftraks, the annual event features some of the most spectacular scenery and most extreme terrain in all of Britain. In 2005, drivers had to contend with rocky outcrops, heavily wooded slopes and peat bogs so deep that only way through was with the aid of well-treaded tires and a winch. Heavy rains made matters worse (or better, depending upon one's perspective) and drew comparisons by competitors to conditions at the annual Malaysian Rainforest Challenge, widely viewed as the most challenging winch event in the world.

To withstand the rigors of some of the Argyll's terrain, all 44 drivers competing in 2005 selected Plasma 12-Strand winch lines from Puget Sound Rope as an alternative to steel cable. According to Simon Buck, the only British winner of the Malaysian Rainforest Challenge, "I've used wire rope and Plasma in competition and Plasma is simply the only safe option for off-road winching. Having used the Plasma 12-strand in various conditions I wouldn't go back to wire rope for anything. It's far superior to wire rope for both safety and ease of use when it's used properly."



Plasma 12-Strand rope has a smooth surface and its hue adds color to winches that carry it.



Going uphill or downhill, vehicles that hope to finish the Argyll Forest Challenge employ Plasma winch lines.



Simon Buck's Land Rover makes good use of Plasma rope as it goes on to win the Malaysian Rainforest Challenge.