PLASMA SYNTHETIC ROPE:

VERSATILITY FOR LIFTING, WINCHING, AND SLINGS

Advantages of Plasma Synthetic Rope

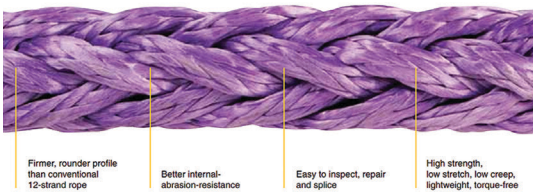
When compared to wire rope and other steel lifting mediums, here are some of the benefits to using Plasma® Synthetic Rope:

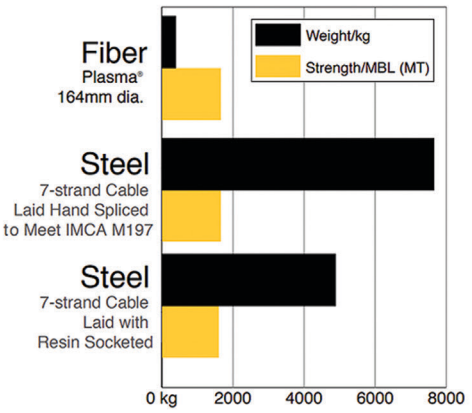
- Equal or greater strength
- Approximately 1/7 the total weight
- Greater flexibility
- Low risk of recoil
- Non-corrosive and safer to handle (no broken wires)
- Buoyant in water
- Synthetic rope slings are also available
- Resistant to corrosion and natural elements, including UV rays, rain, snow, ice, and freezing or high temperatures and liquid absorption.

What is Plasma® Synthetic Rope?

Plasma® Synthetic Rope is manufactured from High Modulus Polyethylene (HMPE) that has been enhanced by a patented recrystallization process. This process draws the precisely twisted strand through a heated fluid-filled pressurized vessel — creating a constant heat profile throughout the strand's cross-section. This process ensures that all filaments are effectively increasing fiber strength efficiency throughout the strand. Finally, a polyurethane finish is applied to the rope to improve snag resistance and sunlight resistance.

SAFETY: Another major benefit of Plasma® Synthetic Rope is the rope doesn't store as much built-up energy as steel does. In the event that a break or failure occurs, there is no whipping or recoil motion of the rope, or projectiles that could injure nearby workers. When a steel rope or chain breaks, the reaction is often violent and explosive and can potentially injure workers or damage nearby equipment. When a Plasma® Rope breaks, the line simply falls to the ground.





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Disadvantages of Plasma Synthetic Rope

Plasma® Ropes may not be the best choice for every project — here are some reasons that Plasma® may not be the best choice for certain applications:

PRICE: HMPE synthetic slings are almost always going to be more expensive pound for pound vs. steel options. Whether you're buying long lengths of rope for winching, lifting, and mooring or you're using it to construct synthetic rope slings, high-performance Plasma® rope will cost you more — especially when you factor in the cost of adding abrasion and cutting protection to get similar protection and durability to that of which a steel product would offer.

ABRASION AND CUTTING: There are a number of different protection options available for Plasma® and other synthetic ropes. These should be used when the possibility of cutting or abrasion exists, like when lifting heavy metal sheets or when lifting loads with sharp edges.

Also, when used on winches, you should make sure that winch surfaces — including flanges and barrels — are kept clean and are not rusted or corroded. Dirt, grit, or corrosion can cause abrasion to the rope when it is deployed or retrieved during winching and can cause premature wear to the individual strands of the rope.

You should also make sure that the rope is kept clean by periodically washing it with a low PH or mild detergent to remove sharp particulates and grit.

DURABILITY: Steel wire rope will always be more durable than a synthetic fiber rope when push comes to shove. Lifting slings manufactured from alloy chain or wire rope will be able to better hold up to the rigors of heavy, bulky, and repetitive lifts in extreme and abusive operating environments.

LOWER HEAT-RESISTANCE: Plasma® fibers have a relatively low softening and melting point and should not be used in applications in which high ambient, reflected, or friction-manufactured heat is anticipated or prevalent. High sustained loads on HMPE ropes under approximate temperatures of 65°C or 150°F may cause creep and strength loss.

TWIST / ROTATION-RESISTANCE: Plasma® 12-strand ropes are braided from alternative left and right hand "twist" lays. Inducing twist into the braided rope lowers both the strength (reducing the balanced construction), and also makes the "opened" twist strands more susceptible to abrasion and cutting. The manufacturer recommends that end-users should attempt to remove any twist and rotation from a braided Plasma® rope or lifting sling before use.

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