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Engineered Cut Protection is the Most Effective Way to Ensure Synthetic Slings are Protected Against Cutting.

The strength of synthetic roundslings can be significantly affected when allowed to come into direct contact with load edges, connection hardware, or if the size and shape of the load edges are not suitable. Shearing or cutting of the synthetic sling material is the single most common cause of accidents involving sling failure. This can result when roundslings are allowed to come into direct contact with edges that are not adequately rounded to a suitable radius. This includes chamfered edges.

Many accidents have occurred because “abrasion resistant” protection devices were used in applications that required “cut resistant” protection devices. Many of the available sling protection devices on the market do not provide information on the effectiveness of the product. Without listing the effectiveness or recommended rated capacities of the cut resistant protection device, end users are ultimately making an uninformed decision on whether the chosen protection will be sufficient.

Slingmax® offers two forms of rated cut protection; CornerMax® Pads and CornerMax® Sleeve. These products have been engineered and tested for a rating of 25,000 lbs. per inch of sling width. While the CornerMax Pad is effective for 90-degree angles, we highly recommend the use of CornerMax Sleeve for all applications as this product is more versatile and can be used on any angled edge or surface. Over the last several years we have seen a steady increase in the sales of CornerMax Sleeve, which we attribute to several reasons.

Slingmax has been aggressively marketing our cut protection products for years, promoting safety within the lifting and rigging industry. We have performed extensive testing of the CornerMax products and have developed training and user guides for these items. Our marketing campaigns have most certainly contributed to the awareness of our cut protection products within the industry.

Through training and certification programs, riggers have become more safety conscious. Riggers are aware of the cut resistant products available to them, and they understand the objective benefits that come with having engineered cut protections that list product specific, recommended rated capacities. We also believe that our Slingmax dealer sales teams have become more educated and are more aggressively offering sling protection with every synthetic sling sold.

Finally, the industry standard writing bodies have also been paying more attention recently to cut protection for synthetic slings. Most of the new or recently revised standards are making it mandatory to utilize cut protection for slings in contact with edges.

There are two standards on roundslings published by the Web Sling & Tie Down Association (WSTDA). Both the WSTDA-RS-1 standard for Synthetic Polyester Roundslings and the WSTDA-RS-1HP standard for High Performance Yarn (HPY) Roundslings state that “Roundslings in contact with edges, corners, or protrusions ***must always*** be protected with materials of sufficient strength, thickness, and construction to prevent damage. In the Foreword, WSTDA defines the words “*must*” and “*shall*” as mandatory rules.

WSTDA also has tables in each of these standards that provide information on minimum edge radii suitable for contact with unprotected polyester and high-performance fiber roundslings.

ASME B30.9-2018 follows suit and states that “Slings in contact with edges, corners, protrusions, abrasive surfaces, or connecting hardware ***shall*** be protected with a material of sufficient strength, thickness, and construction to prevent damage unless the edges are adequately rounded to a suitable radius in accordance with WSTDA-RS-1, Section 4.6, the sling manufacturer, or a qualified person.”

The bottom line is that any synthetic sling should be protected against edges. There is no requirement that sling protection devices be rated or built to any specifications. Slingmax, however, has recognized the importance of having rated cut protection and has been at the forefront of the design and development of sling protection, providing the rigger with the best tools possible to perform their job more safely.

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