SLINGMAX® Technical Bulletin

TB# 20

Date April 9, 2001

Test; Twin Path vs. Single Path Slings with Cut Strands

On this date we tested a Single Path round sling and compared the results to a Twin-Path® Sling. Each sling was made with the same number of core yarn strands. Each sling had 25% of the core yarns cut.

- The material used for the tension members in both slings was K-Spec™ fiber.

- The calculated breaking strength of each sling with no cut strands was 125,000 lbs.

1. We first pulled the Single Path sling to destruction: 65,400 lbs. (52% of optimum)

2. Then we pulled the Twin-Path® Sling to destruction: 114,100 lbs. (91% of optimum)

The Twin-Path® sling with the exact same amount of core yarn and the exact same amount of cut strands achieved a 48,700 lb. higher breaking strength.

During the testing, the overload Tell-Tails in the Twin-Path® sling receded into the cover, showing the user that the sling was nearing failure.

- The Single path sling achieved a 2.6-1 Design Factor with 25% of the strands cut.

- The Twin-Path® design, with 25% of the strands cut, reached a 4.6-1 Design Factor

- **Twin-Path® Slings provide the user with a substantially better product.**

SLING PROTECTION

Most synthetic sling accidents are caused by cutting. There are many kinds of protective sleeves and pads available, but only two synthetic protectors provide adequate cut protection: CornerMax® pads and CornerMax® sleeves. They have been engineered and tested to provide 25,000 lbs. of protection per inch of sling width (4464 kg per centimeter of sling width). CornerMax® pads are designed for 90° straight edges. CornerMax® sleeves are for other edges – curved, rough, or irregular – and are the protection of choice for I-beams. For synthetic slings, the most critical decision is whether cut protection is needed.

Cut Protection – Engineered Softeners

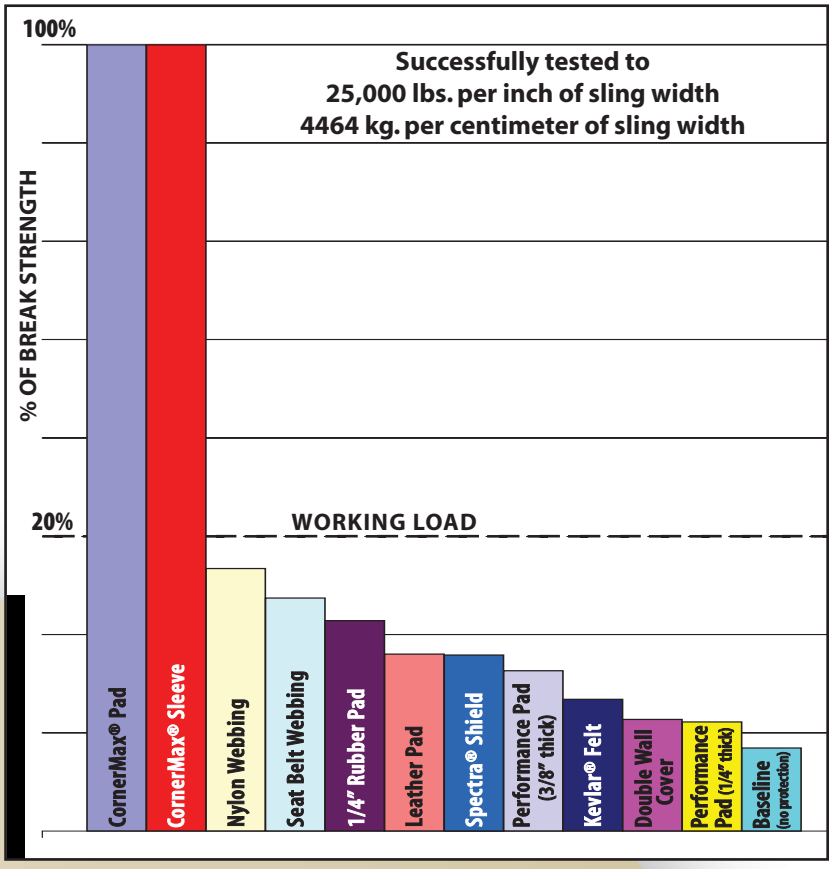
CornerMax® pads are shown in the right two photos. The pad creates a "tunnel" of cut protection – a no-touch zone. Therefore, the edge does not come in contact with the pad or sling. Note that the sides of the pads must be completely supported in order to create and maintain the "tunnel".

CornerMax® sleeves may look like traditional protection sleeves, but ours are made of Dyneema® fiber that is specially woven to provide cut protection for a variety of edges and surfaces. Most commonly used sleeve material cannot stop an edge from cutting the sleeve and possibly the sling too. For test results, see the chart on the reverse side.

Call your Slingmax Rigging Solutions dealer for assistance in making the right choice for protecting your rigging.

SLINGMAX® RIGGING SOLUTIONS

This chart shows the results of testing slings protected by 12 different synthetic materials that are often used for sling protection. In our tests, ten of the most commonly used materials do not allow a sling to reach its working load before the sling is cut and fails. The CornerMax® pad and sleeve allow the synthetic sling to meet its working load with no damage to the sling or the protection.



Other Sling Protection...

Sometimes cut protection is not needed. We have a full line of engineered softeners that are excellent for abrasion protection or for protecting a load surface. The Shackle Pin pad is designed to prevent a synthetic sling from damage when a sling is seated on the pin side of a shackle.

Your Slingmax Rigging Solutions dealer can help you make the right choice for protecting your rigging. Call today!

⚠ WARNING

Damaged or misused protection can result in sling damage or failure. Inspect before each use for cuts, tears, or damage that may prevent protection of the sling. Ensure that protection is the correct size and type to protect the sling. Prevent the sling and its protection from sliding across the load edge. DEATH or INJURY can occur from improper use, maintenance, or inspection.

MAXIMUM LOADING: 25,000 lb. per inch of sling width (4464 kg/cm of sling width).

SLINGMAX® RIGGING SOLUTIONS

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