

Protecting Synthetic Slings Protects Your Life

Choosing the right protection is vital to safety.

Most riggers will tell you to never rig a synthetic sling over a sharp edge. But is that enough? All slings can be damaged, and damaged slings can fail suddenly, without warning.

What can we do to be sure slings are protected from damage?

The industry standard ASME B30.9 Slings provides performance-based criteria for sling protection and requires adequate protection to prevent sling damage that may lead to catastrophic failure.

The Web Sling & Tie Down Association (WSTDA) publishes recommended specifications WSTDA-RS-1 for Roundslings, WSTDA-RS-1HP for High Performance Roundslings, and WSTDA-WS-1 for Web Slings. Each standard offers recommendations for sling protection.

Understanding Protection

To fully understand sling protection, we must consider the type of damage a sling is susceptible to.

The risk of damage to a chain sling can be very different than the risk of damage to a webbing sling, but any sling can be damaged if it is not protected adequately.

Sling protectors must be appropriate for both the type of sling and the load. The sling protector may be required to prevent sling abrasion, to prevent sling

cutting, or to protect the load from being damaged by the sling's tension. When it comes to sling protection, one size or type does not fit all.

A synthetic sling in tension has a much greater risk of damage than a sling at rest.

You may have seen a rigger feel the edge of a load to test whether it was sharp, under the bad assumption that if the edge did not feel sharp to the touch it would not damage the sling. That could be dead wrong!

The edge may not feel sharp to a relatively light touch, but when a sling supports a load, a tremendous amount of force is applied to the sling over the edges of the load. Think of the edge of the load as a dull knife. You might rub your finger over the blade and not cut yourself, but if you put on enough pressure, the blade will cut you no matter how dull it is.



By David Decker

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If load shifting moves the sling along an edge, the risk of cutting goes up. Load shifting may also result in unexpected contact with a damaging surface, so it must be considered.

Most synthetic slings are susceptible to melting at relatively low temperatures. Therefore, synthetic slings rigged over relatively smooth surfaces can fail due to the heat generated by friction if the slings

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Sling protectors

move just a few inches.

How do we protect slings from damage? We put a protective barrier between them and the load, and we rig to prevent load shifting.

In an ideal world, we would have a complete inventory of sling protection devices. Many construction and manufacturing companies make their own sling protectors on site for the particular jobs they do. This is perfectly acceptable if the devices provide adequate protection.

Sling Protection is Your Responsibility

No current requirements dictate how a sling must be protected, but the user is responsible for providing adequate protection.

Over the years, I have seen everything from fire hose to pizza boxes used in an attempt to provide some level of sling protection.

Some people argue that any protection is better than none. But too little protection is no better than none if a sling ultimately fails from not being protected

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well enough.

Although no requirement tells us how to protect slings, a proper lift plan should prescribe the type and placement of sling protection.

Sling-Protection Devices

Some manufacturers offer load-rated sling protection, giving the rigger additional information to help determine the best protection for the sling in a given application.

Sling manufacturers offer pre-made sling protection devices. Commercial sling protection is made from a variety of materials, such as aramid fibers or high-modulus polyethylene (HMPE), nylon, plastics, aluminum, or steel. Many combine two or more materials.

Some sling manufacturers will attach permanent sling protection to the sling if

you ask them to.

For example, permanent sling protection may be a layer of aramid or HMPE webbing sewn over a nylon or polyester webbing sling to protect it from cutting. Protection installed on a roundsling could be a sliding sleeve designed to resist abrasion at the bearing point, such as a hook or shackle.

Sling manufacturers will often be able to offer guidance on selecting slings and sling protection devices appropriate for the type of lifting you plan to use them for.

Whenever you use synthetic slings, remember that all slings require protection when they are exposed to edges or abrasive surfaces.

Failure to properly protect slings during a lift is a poor bet. Don't bet with your life! ■

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