

Materials Handling

Materials Handling - Synthetic Web Slings

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What should you know about using synthetic web slings?

Synthetic web slings are a good choice where highly finished parts or delicate equipment must be protected from damage. The synthetic material has stretch and flexibility to help the slings mould to the shape of the load, gripping securely, while cushioning and absorbing shock more than a wire rope or chain.

- They are lightweight and very easy to handle.
- They are non-sparking, non-conductive and can be used safely in explosive atmospheres.
- Synthetic slings are typically not affected by grease, oil, moisture and certain chemicals. Check with the manufacturer to determine which conditions apply to the exact material you are using.
- Synthetic web slings are easily cut and have poor abrasion resistance when compared with chain and wire rope slings. Protect webbing from sharp corners, protrusions, or abrasive surfaces.
- Protect slings from heat sources such as steam pipes, open flame and welding splatter.
- Nylon slings are damaged by acids, but resist alkalis.
- Polyester slings are damaged by alkalis but resist acids.
- Wet frozen slings will have a reduced load capacity. Follow the manufacturer's recommendations.
- Sunlight, moisture, and temperatures above 90°C (194°F) or below -40°C (-40°F) damage both nylon and polyester slings.

- Use slings made of the right material for the job.
 - Check the manufacturers' slings for their code number and the rated capacity. Reference charts showing slings and hitch-rated capacities are available from manufacturers.
 - Inspect slings before using them.
 - Keep an inspection record for each sling.
 - Replace damaged slings or repair only according to the manufacturer's recommendations.
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What should you do when selecting synthetic web slings?

- Determine the weight of the load.
 - Refer to the manufacturer's reference chart for the capacity rating.
 - Check a sling before using it.
 - Prevent loading more than the rated capacity by considering the sling angle.
 - Ensure that the sling choking action is on the webbing, not the hardware.
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What should you avoid when using slings?

- Do not drag slings across floors or other abrasive surfaces.
 - Do not drop slings with metal fittings.
 - Do not set loads down on top of slings.
 - Do not pull slings from under loads when the load is resting on the sling.
 - Do not weld anything hung from a sling.
 - Do not lengthen or shorten slings by tying knots.
 - Do not place stitch patterns (laps) on hooks, around sharp corners, or at choker-bearing points.
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What kind of damage makes a synthetic web-sling unusable?

- Increased stiffness of sling material.
- Acid or alkali burns.

- Melted, burned or weld spatter damage.
 - Holes, tears, cuts, snags.
 - Broken or worn stitching.
 - Excessive abrasive wear.
 - Knots in any part of the sling.
 - Crushed webbing or embedded particles.
 - Bleached sling colour.
 - Defective fittings (twisted, corroded, cracked, etc.)
 - Exposure to extreme temperatures (lower than -40°C or higher than 90°C.)
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