

# ORCBS -Occupational Safety

## Synthetic Web Slings

Synthetic web slings are regulated under the MIOSHA Part 49 Slings.

Synthetic web slings must be purchased from a manufacturer who has proof tested the slings. Do not make one from synthetic webbing. Synthetic webbing is usually made from nylon or polyester; choose the correct sling based on each job.

### Requirements:

- A synthetic sling must have a permanently affixed, durable identification, stating the size, grade, rated capacity and reach.
- Synthetic slings must be inspected daily before using, for signs of wear and stress.
- Synthetic slings must be thoroughly inspected and the inspection documented at least every 12 months.
- The sling must be proof-tested by the manufacturer when new, repaired or reconditioned. Proof testing is a non-destructive tension test to verify construction and workmanship.
- A synthetic sling can only be repaired by the manufacturer.
- Nylon and polyester slings must not be used at a temperature of 180°F or greater.
- Polypropylene slings must not be used at a temperature in excess of 200°F.
- Stitching is the only method to be used to attach fittings to webbing and to form eyes.
- A web sling with aluminum fittings cannot be used when caustics are present.
- Nylon slings cannot be used when acids are present.
- Polyester and polypropylene slings cannot be used when caustics are present.

### Selection and Maintenance:

- Do not store slings in sunlight.
- Slings may be laundered but hang dry. Using a drying with significantly reduce their strength.
- Moisture can damage synthetic slings, store in a dry area.
- Chemicals may affect synthetic slings. Refer to the manufacturer's specifications for chemical resistance.

### Daily inspection

Remove slings from service if

- The identification tag is missing or unreadable.
- Red warning stitches or other warning devices are visible indicating that the sling has been overloaded and damaged.
- Broken or worn stitching
- Excessive abrasive wear
- Knots in any part of the sling
- Bleached sling color
- Holes, tears, cuts and snags.

- Increased stiffness of the material.
- Acid or caustic burns.
- Crushed webbing or imbedded particles.
- Melted or burned areas.
- Excessive pitting, corrosion, distortion or cracked metal fittings.
- Other visible damage that may change the strength of the sling.

#### Safe lifting

- Refer to the manufacturer's lifting tables for the load reductions when lifting with a multi-leg sling.
- Avoid kinks, loops or twists in the legs.
- Lift slowly to avoid shock loading and stressing the sling.
- Do not pull a sling out from under the load with the load resting on the sling. Block the load up to remove the sling.
- Do not shorten the sling by any means such as knots or bolts.
- Slings should not be loaded over the rated load.
- Make sure the sling is assembled properly before lifting.
- Make sure the periodic inspections have been done before lifting.
- The manufacturer should perform all repairs and the manufacturer must proof test all repairs.
- Consult the manufacturer if slings are used at an angle of less than 30°
- Do not drop slings if they have metal fittings.
- Sharp corners on items being lifted should be padded to avoid cutting the sling.