

Cranes, Hoists & Slings – Appendix F: Synthetic Web Slings

Sling Identification: Each sling shall be marked or coded to show the rated capacities for each type of hitch and type of synthetic web material.

Webbing: Synthetic webbing shall be of uniform thickness and width and selvage ends shall not be split from the webbing's width.

Fittings: Fittings shall be:

- Of a minimum breaking strength equal to that of the sling; and
- Free of sharp edges that could in any way damage the webbing.

Attachment of End Fittings to Webbing and Formation of Eyes: Stitching shall be the only method used to attach end fittings to webbing and to form eyes. The thread shall be in an even pattern and contain a sufficient number of stitches to develop the full breaking strength of the sling

Environmental Conditions: When synthetic web slings are used, the following precautions shall be taken:

- Nylon web slings shall not be used where fumes, vapors, sprays, mists or liquids of acids or phenolics are present.
- Polyester and polypropylene web slings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.
- Web slings with aluminum fittings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.

Safe operating temperatures: Synthetic web slings of polyester and nylon shall not be used at temperatures in excess of 180 °F. Polypropylene web slings shall not be used at temperatures in excess of 200 °F.

Repairs:

- Synthetic web slings which are repaired shall not be used unless repaired by a sling manufacturer or an equivalent entity.
- Each repaired sling shall be proof tested by the manufacturer or equivalent entity to twice the rated capacity prior to its return to service. The employer shall retain a certificate of the proof test and make it available for examination.
- Slings, including webbing and fittings, which have been repaired in a temporary manner shall not be used.

Removal from Service: Synthetic web slings shall be immediately removed from service if any of the following conditions are present:

- Acid or caustic burns
- Melting or charring of any part of the sling surface
- Snags, punctures, tears or cuts
- Broken or worn stitches
- Distortion of fittings