

RECOMMENDED OPERATING PRACTICES for POLYESTER ROUNDSLINGS

SECTION 1 PUROPSE

- 1.1.1** The purpose of this chapter is to provide guidelines for the qualified person responsible For polyester roundsling selection, rigging, inspection and use.

SECTION 2 MECHANICAL CONSIDERATIONS

- 2.1** Determine weight of the load. The weight of the load shall be within the rated capacity of the polyester roundsling(s).
- 2.2** Select a polyester roundsling having suitable characteristics for the type of load, hitch and environment.
- 2.3** Polyester roundslings shall not be loaded in excess of the rated capacity. Consideration shall be given to the roundsling to load angle, which affects rated capacities. See note
- 2.4** Polyester roundslings with fittings, which are used in a choke hitch, shall be of sufficient length to assure that the choking action is on the roundsling, and never on the fitting.
- 2.5** Polyester roundslings used in basket hitch shall have the load balanced to prevent slippage.
- 2.6** The openings in fittings shall be the proper shape and size to ensure that the fittings will seat properly on the polyester roundsling, crane hook, or other attachments.
- 2.7** Polyester roundslings shall always be protected from being cut by sharp corners, sharp edges, protrusions, or abrasive surfaces.
- 2.8** Polyester roundslings shall not be dragged on the floor or over abrasive surface.
- 2.9** Polyester roundslings shall not be twisted, shortened, lengthened, tied into knots, or by joined by knotting.
- 2.10** Polyester roundslings shall not be pulled from under loads when the load is resting on the polyester roundsling.
- 2.11** Do not drop polyester roundslings equipped with metal fittings.

- 2.12** Polyester roundslings that appear to be damaged shall not be used unless inspected and accepted as useable under sections 4 and 5
- 2.13** The polyester roundsling shall be hitched in a manner providing control of load.
- 2.14** Personnel, including all portions of the human body, shall be kept from between the polyester roundsling and the load, and from between the polyester roundsling and the crane hook or hoist hook.
- 2.15** Personnel shall stand clear of the suspended load.
- 2.16** Personnel shall not ride the polyester roundsling.
- 2.17** Shock loading shall be avoided.
- 2.18** Twisting the legs (branches) shall be avoided.
- 2.19** Load applied to a hook shall be centered in the bowl of the hook to prevent point loading.
- 2.20** During lifting, with or without the load, personnel shall be alert for possible snagging of the polyester roundsling.
- 2.21** The polyester roundslings legs (branches) shall contain or support the load from the sides above the center of gravity when using a basket hitch.
- 2.22** Polyester roundslings shall be long enough so the rated capacity is adequate when the sling to load angle is taken into consideration. See note
- 2.23** Only polyester roundslings with legible identification tags shall be used.
- 2.24** Tags and labels should be kept away from the load, hook and point of choke.
- 2.25** The polyester roundsling shall not be constricted or bunched between the ears of a clevis or shackle, or in a hook. When a polyester roundsling is used with a shackle, it is recommended that it be used (rigged) in the bow of the shackle.
- 2.26** Place blocks under the load prior to setting down the load, to allow removal of the polyester roundsling, if applicable.

SECTION 3 ENVIRONMENTAL CONSIDERATIONS

3.1 Polyester roundslings should be stored in a cool, dry, and dark place to prevent loss of strength when not in use through exposure to ultra-violet rays. The polyester roundslings shall not be stored in chemically active areas.

3.2 Chemically active environments can affect the strength of polyester roundslings in varying degrees ranging from little to total degradation. The polyester roundsling manufacturer, or qualified person, should be consulted before roundslings are used in a chemically active environment.

3.2.1 ACIDS

3.2.1.1 Polyester is resistant to many acids, but is subject to degradation, ranging from little to moderate in some acids.

3.2.1.2 Each application shall be evaluated, taking into consideration the following:

- a.** Type of acid.
- b.** Exposure conditions.
- c.** Concentration
- d.** Temperature

3.2.2 ALKALIS

3.2.2.1 Polyester is subject to degradation in alkalis, ranging from little to total degradation.

3.2.2.2 Each application shall be evaluated, taking into consideration the following:

- a.** Type of alkali
- b.** Exposure conditions
- c.** Concentration
- d.** Temperature

3.3 Polyester roundslings shall not be used at temperatures in excess of 194° F (90°C), or at temperatures below minus 40° F (-40°C).

3.4 Polyester roundslings incorporating aluminum fittings shall not be used where fumes, vapors, sprays, mists or liquids of alkalis and/or acids are present.

SECTION 4 INSPECTION

4.1 Polyester roundslings shall be visually inspected by a designated person handling the polyester roundsling before each use. These visual observations shall be concerned with the identification tag and discovering damage, such as listed in section 5. Polyester roundslings shall be removed from service if there is any doubt as to the condition of the roundsling.

4.2 TYPE OF INSPECTION

- a. Initial Inspection** – Before any polyester roundsling is placed into service it shall be inspected by a designated person to insure that the correct roundsling is being used, as well as to determine that the roundsling meets the requirements of this specification.
- b. Frequent Inspection** – This inspection shall be made by a qualified person handling the polyester roundsling at the time the roundsling is used.
- c. Periodic Inspection** – This inspection shall be conducted by a designated person. Frequency of inspection should be based on :
 - 1. Frequency of use.
 - 2. Severity of service conditions.
 - 3. Experience gained on service life of polyester roundslings used in similar applications.
 - 4. Periodic inspections should be conducted at least monthly.

SECTION 5 REMOVAL FROM SERVICE

5.1 A polyester roundsling shall be removed from service if any of the following is visible:

- a.** If polyester roundsling identification tag is missing or unreadable.
- b.** Melting, charring or weld spatter of any part of the polyester roundsling.
- c.** Holes, tears, cuts, embedded particles, abrasive wear, or snags that expose the core fibers of the polyester roundsling.
- d.** Broken or worn stitching in the cover which exposes the core fibers.
- e.** Fittings when damaged, stretched or distorted in any way.
- f.** Polyester roundslings that are knotted.
- g.** Acid or alkali burns of the polyester roundsling.
- h.** Any conditions which cause doubt as to the strength of the polyester roundsling.

SECTION 6 INSPECTION RECORDS

- 6.1 Written inspection records, utilizing the identification for each polyester roundsling as established by the user, should be kept on file. These records should show a description of the new polyester roundsling and its condition on each subsequent inspection.

SECTION 7 REPAIRS

- 7.1 There shall be no repairs of load bearing fibers.
- 7.2 Only the original manufacturer or their appointed agent shall do repairs to the protective covers.
- 7.3 Only polyester roundslings which can be identified from the information on the identification tag shall be repaired.
- 7.4 All repaired polyester roundslings shall be proof tested to a minimum of two (2) times the rated capacity before being put back into service. Certification of proof test should be provided.

This Recommended Standard Specification has been formulated as a guide to users, industry and government, to ensure proper use, maintenance and inspection of synthetic polyester roundslings. The existence of this recommended standard specification does not prevent members of the Web Sling and Tiedown Association, and other manufacturers, from manufacturing or selling products beyond the scope of this recommended standard specification.