

**WAC 296-78-755 Natural and synthetic fiber rope slings. (1)**

Sling use.

(a) Fiber rope slings made from conventional three strand construction fiber rope must not be used with loads in excess of the rated capacities prescribed in Tables D-16 through D-19 of Part "D" of the general safety and health standards, chapter 296-24 WAC.

(b) Slings not included in these tables must be used only in accordance with the manufacturer's recommendations.

(2) Safe operating temperatures. Natural and synthetic fiber rope slings, except for wet frozen slings, may be used in a temperature range from minus 20°F to plus 180°F without decreasing the working load limit. For operations outside this temperature range and for wet frozen slings, the sling manufacturer's recommendations must be followed.

(3) Splicing. Spliced fiber rope slings must not be used unless they have been spliced in accordance with the following minimum requirements and in accordance with any additional recommendations of the manufacturer:

(a) In manila rope, eye splices must consist of at least three full tucks, and short splices must consist of at least six full tucks, three on each side of the splice center line.

(b) In synthetic fiber rope, eye splices must consist of at least four full tucks, and short splices must consist of at least eight full tucks, four on each side of the center line.

(c) Strand end tails must not be trimmed flush with the surface of the rope immediately adjacent to the full tucks. This applies to all types of fiber rope and both eye and short splices. For fiber rope under one inch in diameter, the tail must project at least six rope diameters beyond the last full tuck. For fiber rope one inch in diameter and larger, the tail must project at least six inches beyond the last full tuck. Where a projecting tail interferes with the use of the sling, the tail must be tapered and spliced into the body of the rope using at least two additional tucks (which will require a tail length of approximately six rope diameters beyond the last full tuck).

(d) Fiber rope slings must have a minimum clear length of rope between eye splices equal to ten times the rope diameter.

(e) Knots must not be used in lieu of splices.

(f) Clamps not designed specifically for fiber ropes must not be used for splicing.

(g) For all eye splices, the eye must be of such size to provide an included angle of not greater than sixty degrees at the splice when the eye is placed over the load or support.

(4) End attachments. Fiber rope slings must not be used if end attachments in contact with the rope have sharp edges or projections.

(5) Removal from service. Natural and synthetic fiber rope slings must be immediately removed from service if any of the following conditions are present:

(a) Abnormal wear.

(b) Powdered fiber between strands.

(c) Broken or cut fibers.

(d) Variations in the size or roundness of strands.

(e) Discoloration or rotting.

(f) Distortion of hardware in the sling.

(6) Repairs. Only fiber rope slings made from new rope must be used. Use of repaired or reconditioned fiber rope slings is prohibited.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-78-755, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.040, 49.17.050 and 49.17.240. WSR 81-18-029 (Order 81-21), § 296-78-755, filed 8/27/81.]