

Fiber Optic Cable Storage and Respool Guide

Scope

The following procedure provides instructions on how to store and respool Berk-Tek cables.

General

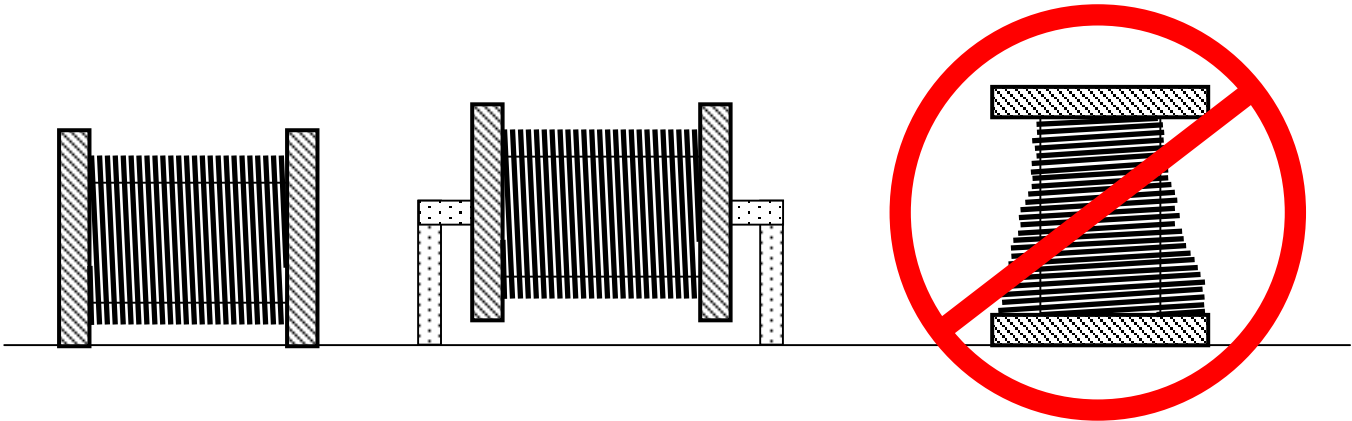
- **To assure undamaged cables**, it is always good practice to handle the cables with care.
- Fiber optic cable is sensitive to excessive pulling, bending and crushing forces. Any such damage may alter the cable's characteristics to the extent that the cable section may have to be replaced.
- Following the recommended procedures will assure that the same high quality of the bulk cable received is maintained after the cable is stocked, cut, and/or shipped.

Action Upon Receipt

- **A fiber continuity test** is recommended after receiving a bulk reel of Berk-Tek Optical Fiber Cable if there is evidence that the cable may have been damaged during shipment.

Indoor Storage

- **Keep the reel tag** that comes on the cable with the cable for identification. A bulk reel of optical fiber cable shipped from Berk-Tek always has a reel tag attached. The reel tag has vital information, including the reel tag number, the cable description, attenuation, bandwidth and cable length. The reel tag should remain with the cable to assure future traceability.
- **Store fiber optic cable reels standing on both flanges, or held through the center** as shown. Never store a cable reel sitting on one flange surface. Cables stored on one flange surface will often have wraps of cable cascade down to one end of the reel, causing possible future cable damage when unwinding.

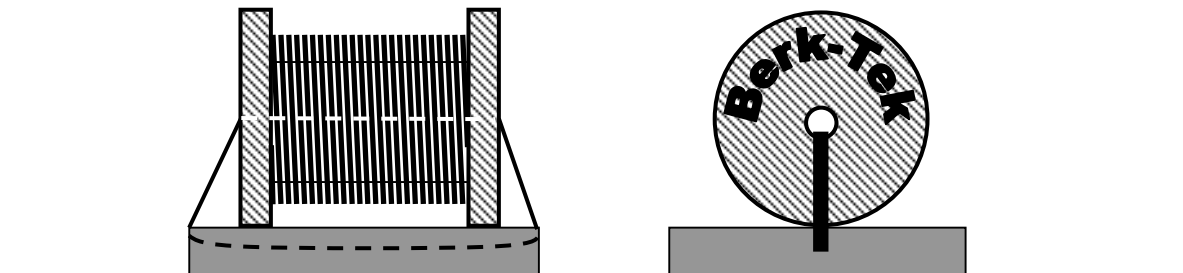


Standing Reel
on Both Flanges
OK

Supported
Through Center
OK

Reel Sitting
on One Flange Surface
NO!

- **When banding cables to pallets**, place the band through the arbor hole in the center of the reel. The flanges should contact the pallet, and the cable package should not touch the pallet. Do not tighten to the point that the reel flange is damaged.



Banded to a Pallet
OK

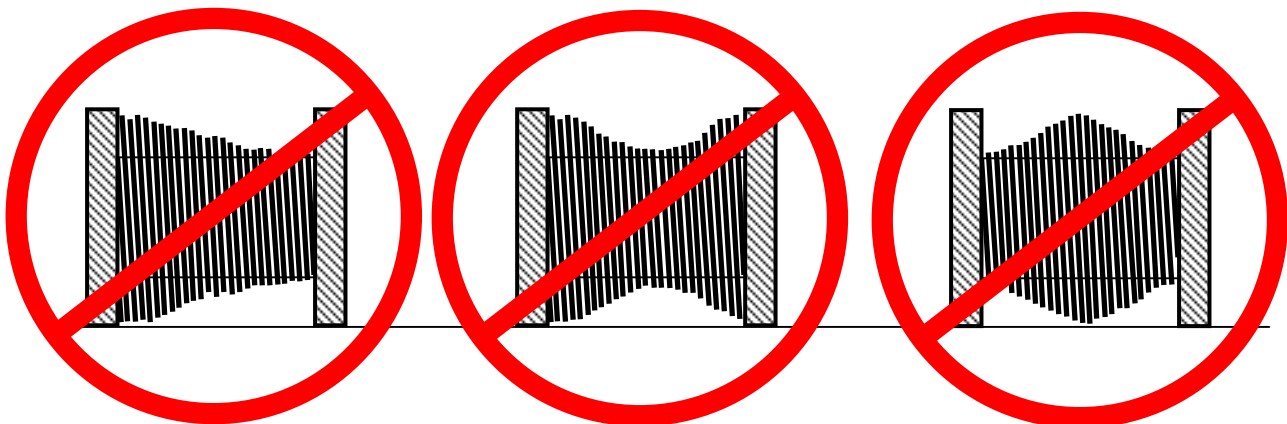
- **Storage Temperatures** for standard cables: -40°C to +85°C

Outdoor Storage - Additional Requirements

- Note that although Outside Plant cables can be stored out of doors, the appearance of the reel can suffer due to weathering of the wood. **For optimum customer satisfaction, storing all reels indoors is recommended.**
- **If outdoor storage is necessary, cables on solid wood reels only** may be stored out of doors. Particle Board flange and/or Cardboard Drum reels should not be used for Outside Plant cables that may eventually be stored outdoors. Water will damage Particle Board or Cardboard Flanged reel parts, making it very difficult to payoff the cable from the package.

Respooling Requirements for Optical Fiber Cables

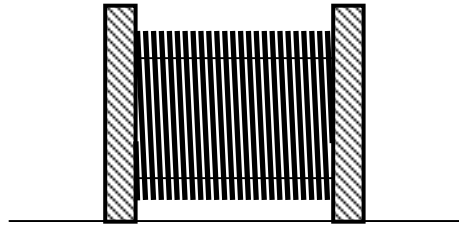
- **When selecting a reel size**, do not exceed the minimum bend radius of the cable (see values in Berk-Tek catalog and in a chart on the next page).
- **When respooling a cable, the package should be even**, and not bunched up in the center, or on either or both ends.



Package Bunched
To One Flange
NO!

Package Bunched
To Both Flanges
NO!

Package Buildup
In Center
NO!



Evenly Distributed Package OK

- **Do not crush or pinch cables between sharp objects or around sharp bends** – this may cause permanent optical defects.
- **For the smaller cables**, such as Berk-Tek’s Interconnect cables and the 6 to 12 fiber Premise Distribution cables, it is recommended that the starting end be tied in a knot before respooling. This practice secures the cable’s components and strength members into place, thus preventing the elongation of the outer jacket.
- **Do not bend the cable sharply** – this may cause permanent optical defects. A minimum bend radius for each Berk-Tek Fiber optic cable family is shown below.
- **Start the respoiler and pay off at a slow speed.** Respool from and to the visible top of the reel. Ensure that the cable is snug on the respoiler drum and has no gaps. If any corrections need to be made, stop the unit and make the corrections.
- **Do not twist flat and non-round cables.** Keep the cable’s print side with the same orientation (either top or bottom) from the payoff, through any guides or counters, all the way to the take-up reel. Do not twist the cable on the take-up reel.



Twisted Flat Cable
NO!



Straight Flat Cable
OK

- **Do not use excessive tension or widely varying cable tension** while respooling. Maintain an even tension on the cable, taking care not to exceed the cable's tensile loadings that are listed in the Berk-Tek catalog. See the following chart for recommended respooling tensions that are safe for all fiber counts of the products listed.

<u>Product</u>	<u>Safe* Maximum Respooling Tension (lbs.)</u>	<u>Safe* Minimum Bend Radius (in.)</u>
Interconnect Tight Buffered	10	2.8
Adventum Loose Tube (≤ 12 fibers)	30	10.7
Adventum Loose Tube (> 12 fibers)	30	10.8
Premise Distribution Tight Buffered	30	14.1
Outside Plant (≤ 12 fibers)	30	10.8
Outside Plant Loose Tube	30	11.1

**Safe values indicated are good for all fiber counts of the indicated cable type. Though many cable types vary the safe values based on fiber count, the most conservative value is indicated here.*

- **When respooling is complete**, allow 1" to 2" clearance between the last cable wrap and the flange edges. To secure, tie the cable's running end (or outside end) with wax string and pull the string down between the cable wraps.

Shipping

- **Prepare the optical fiber cable for shipping after respooling.**
 1. Secure the cable's end by using wax string, tying the cable's end and pulling the string down between the cable wraps.
 2. Shrink-wrapping the cable or the use of hardboard lagging material on the reel is recommended to keep the cable clean and orderly for the customer.
 3. Copy the original parent reel tag and send the copy with the cut length. If this is not possible, mark a reel tag with the reel tag number of the original parent reel tag. This ensures the traceability of the cable.

- **Optical measurements of the optical fiber cable before shipment** are only recommended if the cable has possibly been traumatized or damaged in some manner; otherwise, the test values on the parent reel tag are still applicable. The cable can be tested if the length of the cable is unknown. This is not necessary for cables printed with length markings.

Contact

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A N E X A N S C O M P A N Y

- If you have any questions about this document or require additional assistance, please contact your Berk-Tek representative or customer services at 1-800-BERK-TEK.