Optistar

Fiber Optic Cable Storage and Handling Instructions

1. General

1.1. To assure undamaged cables, it is always good practice to handle fiber optic cables with care.

1.2. Fiber Optic cable is sensitive to excessive pulling, bending and crushing forces. Any such damage may alter the cables characteristics to the extent that a cable section may not meet specification or have to be replaced.

1.3. The following 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.

2. Upon Receipt

2.1. A fiber continuity test is recommended after receiving a bulk reel of fiber optics cable, particularly if there is evidence that the cable may have been damaged during shipment.

3. Indoor Storage

3.1. A bulk reel of optical fiber cable always has a reel tag attached. The reel tag had vital information, such as the reel tag number, the cable description, attenuation, bandwidth and cable length. Always keep the reel tag attached for identification and traceability purposes.

3.2. Always store fiber optic cable by standing the reels on both flanges, or held through the center. Never store a cable reel by laying the reel on its side. This may cause wraps of cable to cascade and tangle, causing possible future cable damage when unwinding.

3.3. When banding cables to pallets, place the band through the arbor hole in the centre of the reel. The flanges should be in contact with the pallet, not the cable. Do not tighten the banding to the point that the reel flange is damaged.

3.4. Storage temperatures for standard cables are -40c to +70c.

4. Outdoor Storage - Additional Requirements

4.1. Reels made from particleboard or cardboard must not be stored outside. Water uptake will damage the reels, making it very difficult to payoff the cable.

4.2. Outside Plant cables may be stored out of doors if reeled onto solid wooden reels. Note: storage out of doors may degrade the appearance of wooden reels due to weathering. For optimum customer satisfaction, it is recommended that reels be stored indoors wherever possible.

5. Handling Cables

5.1. When moving large cable reels by forklift truck, ensure both reel flanges are cradled between the forks. Do not lift by the top flang - this is likely to cause damage.

5.2. Never allow forks to touch the cable surface or reel wrap.

5.3. Alternatively, cables may be hoisted using a shaft placed through the arbor and extending through both flanges.

5.4. When transporting cables by truck, lower or raise, carefully using a hydraulic gate, hoist or fork lift.

5.5. Always load with flanges on edge and chock and block securely.
5.6. Never drop reels from the back of a truck.

6. Respooling Requirements

6.1. It is recognised that in some circumstances, the distributor or user may make the decision to respool the cable following receipt from NDG.
6.2. When selecting an appropriate reel size, do not exceed the minimum bend radius of the cable (refer to values given at time of ordering and in the chart in this document)
6.3. Do not crush or pinch cables between sharp objects or around sharp bends - such as staples. This may cause permanent damage to the optical performance of the cable.
6.4. For smaller cables such as interconnect cables and the 6 to 12 fiber premise distribution cables, it is recommended that a knot be toed at the start of the cable before respooling. This practice secures the cable components, thus preventing elongation of the outer jacket.
6.5. When respooling, do not bend the cable sharply - this may cause permanent optical damage. A minimum bend radius for each of the cable families os shown in this document.
6.6. Start the respooler and pay off at a slow speed. Ensure that each winding of the cable is snug on the receiving reel and there are no gaps. If any correction need to be made, stop the unit and make the necessary corrections.
6.7. Do not twist flat or non-round cables. Keep the cables print legend in 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.
6.8. Maintain an even tension on the cable, taking care not to exceed the cables specified tensile load (refer to values given in this document). Do not use excessive tension while respooling.
6.9. When respooling a cable, the traverse should be even and not bunched up in the center or on either or both ends. Recommended respool settings are:

For Tight Buffer Distribution Cables (PNU, ANU, ANR, PNR's)

Fiber Count	Hub Diameter	Tension
2-12	6"min	1000 grams (2.2lbs)
16-24	10"min	2000 grams (4.4lbs)
24+	24"min	5000 grams (11lbs)

For Interlock Armor Cables (ILPA, ILRA, ILP, ILR)

Fiber Count	Hub Diameter	Tension
2-24	10"min	2500 grams (5.5lbs)
24+	24"min	5000-7500 grams (11-16.5lbs)

For outside Plant Cables (M1A, H1A, M1F, H1F)

Fiber Count	Hub Diameter	Tension
2-24	10"min	2500 grams (5.5lbs)
24+	24"min	5000-7500 grams (11-16.5lbs)

6.10. When respooling is complete, allow 1" to 2" clearance between the last cable traverse and the flange edges. Secure the cables outside end to the reel using plastic wrap.

7. Shipping

7.1. Where the cable undergoes further shipping by the distributor or user, the following guidelines are recommended.

7.2. Optical measurements of the cable prior to shipment are only necessary of the cable has possibly been damaged during storage or respool, otherwise the values on the original test certificate supplied are still applicable.

7.3. After respooling the optical fiber cable maybe prepared for shipping.

7.3.1. Use of reel wrap or cardboard lagging material around the reel is recommended to provide a primary protective layer and to keep the cable clean.

7.3.2. Depending on size and weight, the reel may be placed in a cardboard box or strapped to a pallet to facilitate shipping. When banding cables to pallets, place the band through the arbor hole in the center of the reel. The flanges should be in contact with the pallet, not the cable. Do not tighten the banding to the point that the reel flange is damaged.

7.3.3. Ensure a copy of the appropriate documentation, including the test certificate is sent with the cut length. This ensures traceability of the cable.

7.4. When shipping, follow the handling instructions given in this document.

8. Contact

8.1. Any questions you may have on the handling or storage of fiber optic cable can be directed to our email address : **info@optistar.co.nz**