

COMMERCIAL ITEM DESCRIPTION

PLUGS, TAPERED TUBE, BLOWN OPTICAL FIBER

The General Services Administration has authorized the use of this commercial item description (CID).

1. SCOPE. This Commercial Item Description (CID) covers the requirements for a tapered tube plug (TTP) which is used within a Blown Optical Fiber (BOF) tube to prevent movement of the BOF fibers or BOF bundles.

2. CLASSIFICATION. This CID uses a classification system that is included in the Part or Identification Number (PIN) as shown in the following example (see 7.2).

2.1 Part or Identification Number (PIN).

AA59730 - TTP - 2

CID number \_\_\_\_\_

Plug nominal inner diameter (in mm) \_\_\_\_\_

3. SALIENT CHARACTERISTICS.

3.1 Design, construction and dimensions. Design, construction and dimensions shall be as specified in figure 1. One side of the tapered tube plug shall be capable of being separated to allow installation of the tapered tube plug around a blown optical fiber bundle.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be sent by letter to: Commander, Naval Sea Systems Command, ATTN: SEA 05Q, 1333 Isaac Hull Ave SE Stop 5160, Washington Navy Yard, D.C. 20376-5160

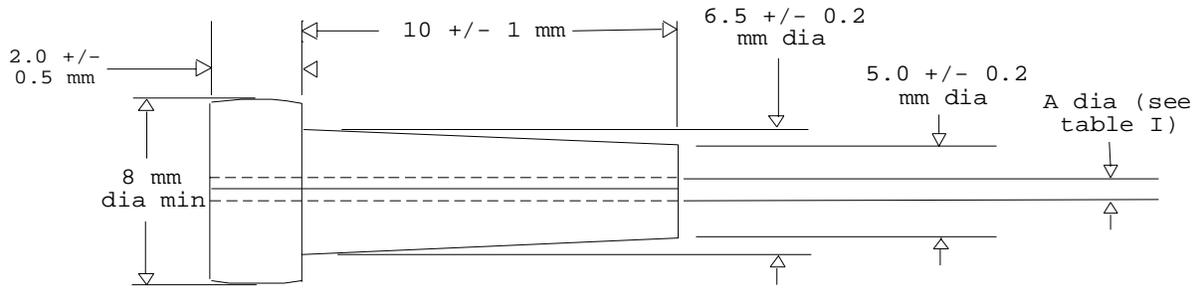


Figure 1. BOF tapered tube plug.

Table 1. Tapered tube inside diameter dimensions.

PIN dash number	A diameter
- TTP - 2	1.75 mm ± 0.1 mm
- TTP - 3	2.85 mm ± 0.1 mm

3.2 Materials.

3.2.1 Polymer materials. Polymer materials shall not be affected by the use of alcohol based cleaning solutions. Polymer materials shall not degrade when the tapered tube plug is operated under the environmental conditions defined herein.

3.2.2 Metallic materials. Metallic materials shall not be used.

3.2.3 Toxic and hazardous products and formulations. The products used in the tapered tube plug construction shall not give off toxic or explosive fumes when exposed to flame. Materials used shall have no adverse effect on the health of personnel when used for the intended purpose.

3.2.4 Fungus. When tested in accordance with TIA/EIA-455-56 for a duration of 28 days, tapered tube plug materials shall show sparse or very restricted microbial growth and reproduction with minor or inhibited substrate utilization. There shall be little or no chemical, physical, or structural change detectable.

3.2.5 Flammability. When tested in accordance with UL-94, tapered tube plug materials shall have a rating of V-0 or V-1.

3.2.6 Durometer. When tested in accordance with ASTM D 2240 tapered tube plug polymer materials shall have a Type A durometer of 75 ± 10.

3.2.7 Tensile strength and elongation. When testing in accordance with ASTM D 638, the tensile strength of the tapered tube plug polymer materials shall be not less than 9.0 Mpa. The elongation at break shall be not less than 160 percent.

3.3 Environmental properties.

3.3.1 Temperature ranges. The tapered tube plug shall operate over a temperature range from -28 degrees C to +65 degrees C and shall be capable of withstanding storage under temperatures from -40 degrees C to +70 degrees C.

3.3.2 Storage temperature. When tested for 24 hours at the low storage temperature, and 24 hours at the high storage temperature, the tapered tube plug shall withstand exposure to the defined storage temperature extremes. Upon visual examination, there shall be no evidence of physical damage detrimental to the operation of the tapered tube plug. After exposure, the tapered tube plug shall meet the dimensional requirements specified in 3.1.

3.4 Mass. When measured with scales, the mass of the tapered tube plug shall be not greater than 1 gm.

3.5 Size. When visually inspected in accordance with TIA/EIA-455-13, tapered tube plug dimensions shall be in compliance with figure 1 and table 1.

3.6 Marking. When visually inspected, tapered tube plug packages shall be marked with the manufacturer's CAGE code, name, or logo and the tapered tube plug PIN. Alternatively the tapered tube plug packaging shall be marked with the manufacturer's CAGE code, name, or logo and the manufacturer's commercial part number. Markings shall be legible and permanent.

3.7 Workmanship. When visually inspected, tapered tube plugs shall be free from sharp edges, burrs, rough surfaces or other defects that adversely affect performance or appearance.

4. REGULATORY REQUIREMENTS.

4.1 Recovered materials. Products provided are encouraged to be manufactured with recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. QUALITY ASSURANCE PROVISIONS.

5.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection, examination, and test requirements specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections, examinations, or tests set forth in this description where such inspections, examinations, and tests are deemed necessary to assure supplies and services conform to prescribed requirements.

5.2 Conformance tests. Tapered tube plugs for delivery under this CID shall be subjected at a minimum to the following inspections:

- a. Marking
- b. Workmanship

5.3 Product conformance. The contractor shall certify and maintain objective quality evidence that the product offered meets the requirements of this CID, and that the product conforms to the producer's own drawings, specifications, standards, quality assurance practices, and is the same as

the product provided as a bid sample. The Government reserves the right to require proof of such conformance prior to the first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

5.4 Market acceptability. The item offered must have been sold to the government or commercial market for a minimum of one year.

5.5 Certificate of compliance. A certificate of compliance shall accompany all tapered tube plugs supplied to this CID.

6. PACKAGING.

6.1 Preservation, packaging, packing, labeling, and marking. Preservation, packaging, labeling, and marking shall be as specified in the contract or purchase order.

7. NOTES.

7.1 Intended use. Tapered tube plugs in accordance with this CID are intended to be used as specified in MIL-STD-2042 with blown optical fiber cables and blown optical fiber bundles in accordance with MIL-PRF-85045.

7.2 PIN. The PIN defined in paragraph 2.1 should be used for Government procurement.

7.3 Sources of documents.

ASTM standards are available from the ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania, 19428-2959.

EIA standards are available from the Electronics Industry Alliance, Engineering Department, 2500 Wilson Blvd. Suite 300, Arlington, VA 22201-3834.

UL standards are available from the Underwriters Laboratory Inc. 333 Pfingsten Road, Northbrook, IL 60062.

Federal Government publications are available from the Standardization Documents Order Desk, 700 Robbins Avenue, Philadelphia, PA 19120-5094.

7.4 Ordering data. The contract or purchase order should specify the following:

- a. CID number, revision, and CID PIN.
- b. Quality assurance provisions.
- c. Packaging requirements.

7.5 Suggested sources of supply. Suggested sources of supply are listed herein. Additional sources will be added as they become available.

<u>CID PIN</u>	Vendor CAGE	<u>Vendor commercial PIN</u>
<i>TBD</i>		<i>TBD</i>

Custodian:  
Navy - SH  
Air Force - 11  
Army - CR

Preparing activity:  
Navy - SH  
  
(Project 6099-0006-004)

Review Activities:  
Air Force - 13, 19, 93, 99  
Misc - DI