



Blue Diamond Innerduct is RUS/USDA listed.

Blue Diamond is a member of PPI (Plastics Pipe Institute)

Applicable material standards and dimensional specifications.

ASTM F2160 - Solid Wall High Density PE Conduit based on Controlled O.D.

ASTM D3350 - Polyethylene Plastic Pipe Fittings Method

ASTM D3035 - Polyethylene (PE) Plastic Pipe Based on Controlled O.D.

ASTM D1248 - Specification for Polyethylene Plastic Molding and Extrusion Material

ASTM D2239 - Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter

ASTM D2447 - Polyethylene (PE) Plastic Pipe, Schedules 40 and 80, Based on O.D.

ASTM D3485 - Smooth Wall Coilable (PE) Conduit (Duct) for Preassembled Wire and Cable

NEMA Standards Publication TC-7

BELLCORE Generic Requirements for Optical Cable Innerduct and Accessories, 1995

AWWA C901

Specifications.

1.0 Introduction:

The following specification details the requirements for HDPE innerduct as manufactured by Blue Diamond for the purpose of security, protection and identification of fiber optic or coaxial cable networks.

2.0 Innerduct Construction:

2.1 All innerduct shall be circular and of uniform cross section to the dimensions in accordance with ASTM D3035 and F2160

2.2 Innerduct shall be a continuous length of _____ (smooth walled, ribbed inside) with a low friction internal surface containing no welds or joints, coiled on a reel.

2.2.1 Innerduct shall be supplied _____

a)empty

b)containing a pulling medium such as mule tape

c)pre-installed with a cable specified by _____

3.0 Materials:

3.1 The innerduct shall be extruded from virgin High Density Polyethylene (HDPE) resin, in accordance to the requirements of ASTM D3350 with cell classification 345440C.

3.2 Density, melt flow, tensile strength at yield, and environmental stress crack shall conform to the values listed in ASTM D3350, except as noted below.

3.3 Adequate stabilization shall be added during the manufacturing process to protect the polyethylene against thermal and UV degradation throughout the projected lifespan of the finished product.

4.0 Dimensions:

4.1 The innerduct shall be SDR _____, SIDR _____, Schedule 40 or Schedule 80, and conform to the dimensions as outlined in Table _____, or ASTM D3035.

5.0 Identification and Marketing:

5.1 Innerduct shall be permanently marked with a _____ (1) laser ink imprinter, or (2) heat embossed white lettering, which shall be marked in a position 90 degrees to any stripes specified.

5.2 The base colors of the pipe shall be _____

5.3 (0, 1, 2, 3, or 4) 5mm stripes, colored _____ shall be extruded onto the pipe at 90 degrees to the printing and 180 degrees from each other.

5.4 Marking shall include the owners name _____, ASTM and SDR designation, diameter and size. Additionally, a sequential length mark of _____ shall show length of the innerduct.

5.5 Innerduct shall be marked so that date of manufacture, shift and lot of resin can be identified and referenced to certifications and quality control test results.

6.0 Quality Assurance:

6.1 Manufacturer shall provide certification of the properties as specified above.

6.2 In addition to continuous in process inspection and control, batch samples will be checked for finish, print quality, dimensions and ovality.

6.3 The above tests are in addition to the resin requirements as outlined in ASTM D3350.

6.4 All reels will be marked and labeled with customer purchase order, project name, or other information for tracking and receiving.

