



Standard Specification for Coilable High Density Polyethylene (HDPE) Cable in Conduit (CIC)¹

This standard is issued under the fixed designation D3485; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope*

1.1 This specification covers cable in conduit (CIC), which is a smooth-walled, coilable, high-density polyethylene (HDPE) conduit (duct) that contains preassembled wires and cables. The outside diameter of the conduit is controlled and the wire or cable encased within may be comprised of single or multiple configurations consisting of electrical/power wires or cables, fiber optic, traditional copper communication, coaxial cable, or any combination thereof. CIC configurations are preassembled into the conduit during the extrusion process and in industry-specific designs for use in commercial, industrial, transportation, government, and utility applications

1.2 This specification does not attempt to identify every possible preassembled conduit/cable configuration but is intended to identify material and minimum assembled product properties for optimizing reliability and service life.

1.3 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

NOTE 1—UL 1990 and CSA C22.2 No.327 have a similar scope to D3485; however, there are differences in scope and requirements.

NOTE 2—End users may elect to field install single or multiple wire or cable configurations into field-installed conduit. In the case where polyethylene conduit is to have the wire or cable configurations field installed, then the more appropriate specifications to select for establishing the conduit's material, dimensional, workmanship, and property tests would be Specification F2160, UL 651A, CSA C22.2 No.327 or NEMA TC-7.

NOTE 3—Whenever two sets of values are presented, in different units, the imperial units are the standard, while those in the parentheses (metric units) are provided for informational purposes.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

¹ This specification is under the jurisdiction of ASTM Committee F17 on Plastic Piping Systems and is the direct responsibility of Subcommittee F17.26 on Olefin Based Pipe.

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1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

- D618 Practice for Conditioning Plastics for Testing
- D638 Test Method for Tensile Properties of Plastics
- D790 Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- D792 Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement
- D1238 Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer
- D1505 Test Method for Density of Plastics by the Density-Gradient Technique
- D1600 Terminology for Abbreviated Terms Relating to Plastics
- D1693 Test Method for Environmental Stress-Cracking of Ethylene Plastics
- D2122 Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
- D2412 Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
- D2444 Practice for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)
- D3350 Specification for Polyethylene Plastics Pipe and Fittings Materials
- D4883 Test Method for Density of Polyethylene by the Ultrasound Technique
- F2160 Specification for Solid Wall High Density Polyethylene (HDPE) Conduit Based on Controlled Outside Diameter (OD)

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

*A Summary of Changes section appears at the end of this standard