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Solid-Wall Coilable and Straight Electrical Polyethylene Conduit

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Foreword

The purposes of this Standards publication for high-density polyethylene (HDPE) conduit (duct) intended for underground use in the installation and protection of electrical cables are:

- a. to list dimensions and other significant requirements; and
- b. to state the required properties of these products and to assist in selecting and obtaining the proper product for a particular need.

In addition, this Standard addresses the factory installation of electrical cable, or pull media commonly used to assist in the installation of cables.

User needs have been considered throughout the development of this Standard. The Polymer Raceway Products Section of NEMA, through its Members, works closely with such organizations as SIA International, appropriate government agencies, testing laboratories, and others in the periodic review and revision of this Standard.

In the preparation of this Standards publication, input of users and other interested parties has been sought and evaluated. Inquiries, comments, and proposed or recommended revisions should be submitted to the concerned NEMA product subdivision by contacting:

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This Standard was approved by the NEMA Polymer Raceway Products Section. Approval does not necessarily imply that all Members of the Section voted in its approval. At the time of publication, the Section had the following Members:

ABB, Inc. — www.abb.com — Memphis, TN
Anamet Electrical, Inc. — www.anamet.com — Mattoon, IL
Atkore International — www.atkore.com — Harvey, IL
Champion Fiberglass, Inc. — www.championfiberglass.com — Spring, TX
Electri-Flex Company — www.electriflex.com — Roselle, IL
FRE Composites Group — www.frecomposites.com — Saint-Andre-d'Argenteuil, QC, Canada
Hubbell Incorporated — www.hubbell.com — Shelton, CT
IPEX USA LLC — www.ipexamerica.com — Oakville, ON, Canada
Legrand North America — www.legrand.us — West Hartford, CT
Panduit Corporation — www.panduit.com — Tinley Park, IL
Phoenix Contact — www.phoenixcontact.com — Middletown, PA
Southern Pipe, Inc. — www.southern-pipe.com — New London, NC
Southwire Corporation — www.southwire.com — Carrollton, GA
Underground Devices, Inc. — www.udevices.com — Northbrook, IL
United Fiberglass of America, Inc. — www.unitedfiberglass.com — Springfield, OH

Members of the Plastics Pipe Institute were active in providing suggestions and comments in the revision of this Standard.



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Section 1 General

1.1 Scope

This Standard covers several wall types of high-density polyethylene (HDPE) conduit for use in providing a protective raceway for electrical cables or communication cables buried underground or concrete encased.

Note: Typical applications for HDPE conduit include power distribution, site lighting, signal and control, and supervisory control and data acquisition (SCADA).

Equivalent wall types compared with other Standards are listed below in Table 1.

Table 1
Equivalent Wall Types by Other Standards

NEMA TC 7	ASTM F2160 and D3485	ASTM D3035	UL 651A and 1990
EPEC-40	Schedule 40	-	Schedule 40
EPEC-80	Schedule 80	--	Schedule 80
EPEC-11	SDR 11	--	EPEC-A
EPEC-13.5	DR 13.5	--	EPEC-B
EPEC-15.5	DR 15.5	-	--
EPEC-17	--	D3035 (dimensions only)	--

Note: The values stated in U.S. customary (I-P) units are to be regarded as the Standard.

1.2 Referenced Standards

In this publication, reference is made to the standards listed below. Where all or part of an ASTM International, NFPA, or UL, etc., Standard specification is incorporated by reference in these specifications, the referenced Standard shall be the latest edition and revision. Copies are available from the indicated sources.

ASTM International
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

D618-21	<i>Standard Practice for Conditioning Plastics for Testing</i>
D638-14	<i>Standard Test Method for Tensile Properties of Plastics</i>
D790-17	<i>Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials</i>
D792-20	<i>Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement</i>
D1238-20	<i>Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer</i>
D1505-18	<i>Standard Test Method for Density of Plastics by the Density-Gradient Technique</i>