NEMA Standards Publication

NEMA TC 7-2013

Smooth-Wall Coilable Electrical Polyethylene Conduit

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National Electrical Manufacturers Association

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Smooth-Wall Coilable Electrical Polyethylene Conduit

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TABLES

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FOREWORD

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

1. To list dimensions and other significant requirements;
2. 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 ASTM International, appropriate government agencies, testing laboratories, and others in the periodic review and revision of this standard. The Plastics Pipe Institute, in particular, was helpful in proposing revisions for this edition of TC 7.

PLASTICS·PIPE·INSTITUTE®

Proposed or recommended revisions to this Standards Publication should be addressed to:

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Publication No. TC 7-2013 revises and supersedes Publication No. TC 7-2005, the NEMA Standards Publication for Smooth Wall Coilable Electrical Polyethylene Conduit.

The Polymer Raceway Products Section developed this Standards Publication. Section approval of the standard does not necessarily imply that section members voted for its approval or participated in its development. At the time it was published, the Section was composed of the following members:

AFC Cable Systems, a part of Atkore International—www.afcweb.com—New Bedford, MA
Allied Tube and Conduit, a part of Atkore International—www.alliedtube.com—Harvey, IL
Anamet Electrical, Inc.—http://www.anacondasealtite.com—Mattoon, IL
Champion Fiberglass, Inc.—www.championfiberglass.com—Spring, TX
FRE Composites (2005) Inc.—www.frecomposites.com—St. Andre-d'Argenteuil, PQ, Canada
Heritage Plastics, Inc.—www.heritageplastics.com—Carrollton, OH
Hubbell Incorporated—www.hubbell.com—Shelton, CT
IPEX USA, LLC—www.ipexinc.com—Mississauga, ON, Canada
Legrand North America—www.legrand.us—West Hartford, CT
Panduit Corporation—www.panduit.com—Tinley Park, IL
Royal Pipe Systems—www.plastictrends.com—Shelby Township, MI
Southern Pipe, Inc.—www.southern-pipe.com—New London, NC
Thomas & Betts, a member of the ABB Group—www.tnb.com—Memphis, TN
Underground Devices, Inc.—www.udevices.com—Northbrook, IL
United Fiberglass of America—www.unitedfiberglass.com—Springfield, OH

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Section 1
GENERAL

1.1 SCOPE

This standard covers several types of high-density polyethylene (HDPE) conduit for use in providing a protective raceway for electrical cables buried underground. The HDPE conduit types in this specification can be installed direct buried or concrete encased, they are:

EPEC-17– HDPE This type represents the nominal dimensions for HDPE conduit as specified by ASTM D 3035, SDR 17 and UL 651B or UL1990 for CIC.

EPEC-13.5– HDPE This type represents the nominal dimensions for HDPE conduit as specified by ASTM F 2160, SDR 13.5 and UL 651B or UL 1990 for CIC.

EPEC-40– HDPE This type represents the nominal dimensions for HDPE conduit as specified by ASTM F 2160, Schedule 40 and UL 651B or UL 1990 for CIC.

EPEC-80– HDPE This type represents the nominal dimensions for HDPE conduit as specified by ASTM F 2160, Schedule 80 and UL 651B or UL 1990 for CIC.

EPEC-11-HDPE This type represents the nominal dimensions for HDPE conduit as specified by ASTM F 2160, SDR 11 and is not currently covered by UL.

NOTE—The values stated in U.S. customary 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, NFPA, or UL etc., standard specification is incorporated by reference in these Specifications, the reference standard shall be the latest edition and revision. Copies are available from the indicated sources.

American Society for Testing and Materials
100 Barr Harbor Drive
West Conshohocken, PA 19428-2959

D 618-08 *Standard Practice for Conditioning Plastics for Testing*

D 638-10 *Standard Test Method for Tensile Properties of Plastics*

D 790-10 *Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials*

D 792-08 *Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement*

D 1238-10 *Standard Test Method for Flow Rates of Thermoplastics by Extrusion Plastometer*

D 1505-10 *Standard Test Method for Density of Plastics by the Density-Gradient Technique*

D 1600-08 *Standard Terminology for Abbreviated Terms Relating to Plastics*

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