NEMA Standards Publication

NEMA TC 2-2020

Standard for Electrical Polyvinyl Chloride (PVC) Conduit

National Electrical Manufacturers Association

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Electrical Polyvinyl Chloride (PVC) Conduit

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Foreword

The purpose of this publication for electrical polyvinyl chloride (PVC) conduit (EPC) for above-ground and below-ground use is:

a. To list dimensions and other significant requirements.
b. To set forth some of the properties of these products and to assist in selecting and obtaining the proper product for a particular need.

User needs and safety considerations were considered during the development of these Standards. The NEMA Polymer Raceway Products Section will periodically review this Standard and revise it as necessary. Proposals for revisions can be submitted to:

NEMA Technical Operations Department
National Electrical Manufacturers Association
1300 North 17th Street, Suite 900
Rosslyn, Virginia 22209

NEMA TC 2-2020 revises and supersedes NEMA TC 2-2013. NEMA TC 2 was prepared by a subgroup of the NEMA Polymer Raceway Products Section's Technical Committee. During the preparation phase, the following were active participants:

David Kendall—ABB, Inc.
Ray Horner—Atkore International
Brian Deacy—Atkore International
Andrew Nause—IPEX USA, LLC.

NEMA TC 2 was approved by the NEMA Polymer Raceway Products Section. Approval does not necessarily imply that all Members of the Section voted for its approval. At the time of approval, the Section consisted of the following Members:

ABB, Inc.—www.abb.com—Memphis, TN
Anamet Electrical, Inc.—www.anacondasealtite.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—St. 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

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Section 1
General

1.1 Scope

NEMA TC 2 covers the following types of Electrical Polyvinyl Chloride (PVC) Conduit (EPC), which can be constructed of a single, solid layer of PVC, or can be constructed of multiple layers of PVC, one of which may be cellular (foamed) PVC. The designations “40” and “80” refer to Schedules 40 and 80 (EPC-40 and EPC-80), respectively, of Iron Pipe Size (IPS) dimensions. Common uses for these designations are:

a. EPC-40—Electrical conduit designed for normal-duty applications aboveground; concrete-encased applications or direct burial. May be referred to as “heavy wall.”
b. EPC-80—Electrical conduit designed for heavy-duty (areas of physical damage) applications aboveground; concrete-encased applications or direct burial. May be referred to as “extra heavy wall.”

Note: The values stated in U.S. customary units are to be regarded as the Standard.
NEMA TC2 does not fully address elbows and fittings. See NEMA TC 3 latest edition.

1.2 Referenced Standards

In this publication, reference is made to the Standards listed below. Copies are available from the indicated sources. The latest edition of these Standards should be used unless otherwise specified.

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

D 1600	*Standard Terminology for Abbreviated Terms Relating to Plastics*
D 2122	*Standard Test Method of Determining Dimensions of Thermoplastic Pipe and Fittings*
D 2564	*Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems*
D 618	*Standard Practice for Conditioning Plastics for Testing*
D 883	*Standard Terminology Relating to Plastics*
F 402	*Standard Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastic Pipe and Fittings*
F 412	*Standard Terminology Relating to Plastic Piping Systems*
F 656	*Standard Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings*

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TC 3	*Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing*

Underwriters Laboratories Inc.
333 Pfingsten Road
Northbrook, IL 60062

UL 514B	*Conduit, Tubing, and Cable Fittings*
UL 514C	*Nonmetallic Outlet Boxes, Flush-Device Boxes and Covers*
UL 651	*Schedule 40 and 80 Rigid PVC Conduit and Fittings*