NEMA Standards Publication

NEMA TC 13-2014 (R2019)

Standard for Electrical Nonmetallic Tubing (ENT)

National Electrical Manufacturers Association

NEMA Standards Publication TC 13-2014 (R2019)

Electrical Nonmetallic Tubing (ENT)

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Foreword

This standard for Electrical Nonmetallic Tubing (ENT) is intended to:

a. List dimensions and other significant requirements;
b. Set forth some of the properties of these products and assist in selecting and obtaining the proper product for a particular need.

User needs have been considered during the development of this standard.

The Polymer Raceway Products Section (5TC) of NEMA, through its Members, has worked (and continues to work) closely with such organizations as ASTM, the Plastics Pipe Institute, appropriate government agencies, testing laboratories, and others in the periodic review and revision of these Standards for any changes necessary to remain current.

The NEMA Polymer Raceway Products Section will periodically review this standard and revise the adoptions or modifications as necessary. Proposed or recommended revisions can be submitted to:

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

NEMA TC 13-2014 (R2019) is a reaffirmation of NEMA TC 13- 2014. NEMA TC 13-2014 revised and superseded NEMA TC 13-2005.

NEMA TC 13-2014 (R2019) 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
Electric-Flex Company—www.electriflex.com—Roselle, IL
FRE Composites Group—www.frecomposites.com—St. Andre-d'Argenteuil, PQ, Canada
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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 Company—www.southwire.com—Carrollton, GA
Underground Devices, Inc.—www.udevices.com—Northbrook, IL
United Fiberglass of America—www.unitedfiberglass.com—Springfield, OH

CONTENTS

Figures

Tables

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Section 1
General

1.1 Scope

This standard covers Electrical Nonmetallic Tubing (ENT) materials, dimensions, and physical properties.

NOTE—The intent of NEMA TC 13 is to harmonize with the requirements in binational standard ANSI/UL 1653-CAN/CSA C22.2 No. 227.1.

1.2 Referenced Standards

In this publication, reference is made to the Standards listed below. Copies are available from the indicated sources.

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

D 618	*Conditioning Plastics and Electrical Insulating Materials for Testing*
D 883	*Definition of Terms Relating to Plastics*
D 1600	*Abbreviations of Terms Relating to Plastics*
D 2122	*Determining Dimensions of Thermoplastic Pipe and Fittings*
F 412	*Definitions of Terms Relating to Plastic Piping Systems*

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1300 North 17th Street, Suite 900
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TC 3	*PVC Fittings for Use with Rigid PVC Conduit and Tubing*

Underwriters Laboratories LLC
333 Pfingsten Road
Northbrook, IL 60062

UL 651	*Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings*
UL 746B	*Polymeric Materials —Long Term Property Evaluations*
UL 1581	*Reference Standard for Electrical Wires, Cables, and Flexible Cords*
UL 1653	*Electrical Nonmetallic Tubing*

CSA Group
178 Rexdale Boulevard
Toronto, Ontario, Canada M9W 1R3

CAN/CSA C22.2 No. 0.3	*Test Methods for Electrical Wires and Cables*
CAN/CSA C22.2 No. 0.17	*Evaluation of Properties of Polymeric Materials*
CAN/CSA C22.2 No. 211.0	*General Requirements and Methods of Testing for Nonmetallic Conduit*
CAN/CSA-C22.2 No. 227.1	*Electrical Nonmetallic Tubing*