NEMA Standards Publication

NEMA RN 1-2018

# Standard for Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Metal Conduit and Intermediate Metal Conduit

National Electrical Manufacturers Association

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*Polyvinyl-Chloride (PVC) Externally Coated Galvanized Rigid Steel Metal Conduit and Intermediate Metal Conduit*

*Published by*

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# Foreword

The purpose of this standards publication is to describe plastic coatings which are applied to galvanized rigid metal conduit and galvanized intermediate metal conduit. This standard covers the properties and dimensions of these coatings and is intended as an aid for selecting and obtaining the proper coating for added corrosion protection in various applications of these electrical raceways.

User needs have been considered throughout the development of this publication. Proposed or recommended revisions should be submitted to:

Senior Technical Director, Operations
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Rosslyn, VA 22209

This standards publication was developed by the NEMA Steel Conduit and Electrical Metallic Tubing Section of the National Electrical Manufacturers Association. Section approval of the standard does not necessarily imply that all section members voted for its approval or participated in its development. At the time it was approved, the NEMA Steel Conduit and Electrical Metallic Tubing Section was composed of the following members:

| | |
|---|---|
| Atkore International | Harvey, IL |
| Calpipe Industries, Inc. | Rancho Dominguez, CA |
| Republic Conduit, a Nucor Company | Louisville, KY |
| Robroy Industries, Inc. | Verona, PA |
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# Section 1
# General

## 1.1 Scope

This standard covers continuous polyvinyl chloride exterior coatings, corrosion resistant interior coatings, and the galvanized rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), electrical rigid metal conduit—aluminum (ERMC-A), threaded couplings, and elbows to which they may be applied.

## 1.2 Referenced Standards

The following publications are adopted in whole or in part, as indicated by reference in this Standard Publication.

**American National Standards Institute (ANSI)**
11 West 42nd Street
New York, NY 10036

C80.1-2016 *American National Standard for Rigid Steel Conduit—Zinc Coated*

C80.5-2015 *American National Standard for Electrical Rigid Aluminum Conduit—Aluminum (ERMC-A)*

C80.6-2005 *American National Standard for Intermediate Metal Conduit*

**American Society for Testing and Materials (ASTM)**
100 Barr Harbor Drive
West Conshohocken, PA 19428

D149-97a (2004) *Standard Test Methods for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies*
This method describes a procedure for the determination of dielectric strength of solid, semi-solid, and liquid electrical insulating materials.

D638-03 *Standard Test Method for Tensile Properties of Plastics*
This test method is used to determine the tensile strength and the percent elongation of plastic coating compounds. A Type IV specimen is tested at a crosshead speed of 2 inches (50.8 mm) per minute.

D1790-02 *Standard Test Method for Brittleness Temperature of Plastic Film by Impact*
This method covers the determination of that temperature at which plastic film 0.25 mm (10 mils) or less in thickness exhibits a brittle failure.

D2240-04 *Standard Test Method for Rubber Property—Durometer Hardness*
This method is used to determine the Shore A and Shore D hardness of PVC coating compounds.

G6-88(1998) *Standard Test Method for Abrasion Resistance of Pipeline Coatings*
This method is used to determine the abrasion resistance of the applied coating material. It measures the time to loss of infinite resistance when the coating is subjected to an abrasive slurry.

G10-83(2002) *Standard Test Method for Specific Bendability of Pipeline Coatings*
This test method is used to determine the bendability of coated conduit. It consists of bending a small-diameter specimen of coating pipe around a mandrel to produce a range of short-radius bends.

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