NEMA Standards Publication

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American National Standard for Insulators - Composite - Distribution Deadend Type

National Electrical Manufacturers Association

National Electrical Manufacturers Association
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AMERICAN NATIONAL STANDARD

American National Standard

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for Insulators—

Composite—
Distribution Deadend Type

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for Insulators—

Composite—Distribution Deadend Type

Secretariat

Institute of Electrical and Electronics Engineers
National Electrical Manufacturers Association

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American National Standard

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FOREWORD (This foreword is not part of American National Standard C29.13-2000.)

This first edition of this standard was based on a NEMA proposed standards publication for composite distribution insulators used on overhead transmission lines. It was developed at the request of the American National Standards Committee on Insulators for Electric Power Lines, ASC C-29.

This standard was processed and approved for submittal to ANSI by ASC C-29. Committee approval of the standard does not necessarily imply that all committee members voted for approval. At the time it approved this standard, the ASC C-29 Committee had the following members:

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1 Scope

This standard covers composite distribution deadend insulators made of a fiberglass-reinforced resin matrix core, polymer material weathersheds, and metal end fittings intended for use on overhead lines for electric power systems, 69 kV and below. Mechanical and electrical performance levels specified herein are requirements for new insulators.

2 Definitions

See Section 3 of *American National Standard for Composite Suspension Insulators for Overhead Transmission Lines—Tests,* ANSI C29.11, and Section 2 of *American National Standard Test Methods for Electrical Power Insulators*, ANSI C29.1, for definition of terms.

3 General

Insulators shall conform in all respects to the requirements of this standard. The text and figures supplement each other and shall be considered part of this standard.

3.1 Drawings

Manufacturer's drawings, if furnished, shall show the outline of the insulators, together with all pertinent electrical characteristics, mechanical characteristics, leakage distance, and dimensions. Any variations in these dimensions due to manufacturing tolerances shall be indicated.

4 Materials

4.1 Core

The core of the insulator shall consist of a fiberglass-reinforced resin matrix. The core shall be sound and free of defects that might adversely affect the mechanical or electrical properties of the insulators.

4.2 Weathersheds

The weathersheds shall be made of polymer materials such as ethylene propylene or silicone elastomers. They may contain inorganic fillers and organic compounding agents.

4.3 Metal parts

Metal parts, except for cotter keys, shall be made of a commercial grade of malleable iron, ductile iron, steel, aluminum, bronze, or brass. All ferrous parts, other than stainless steel, shall be galvanized in accordance with the specification for *Zinc Coating (Hot-Dip) on Iron and Steel Hardware*, ASTM A153. Cotter keys shall be made from cold-drawn bronze, brass, or austenitic stainless steel wire.