This is a preview of "ANSI/NEMA C29.9-1983...". Click here to purchase the full version from the ANSI store.

ANSI/NEMA C29.9-1983 (R2002, R2012)

American National Standard

Wet Process Porcelain Insulators—Apparatus, Post Type

Secretariat:

National Electrical Manufacturers Association

Approved: August 2012
Published: July 2013

American National Standards Institute, Inc.

This is a preview of "ANSI/NEMA C29.9-1983...". Click here to purchase the full version from the ANSI store.

NOTICE AND DISCLAIMER

The information in this publication was considered technically sound by the consensus of persons engaged in the development and approval of the document at the time it was developed. Consensus does not necessarily mean that there is unanimous agreement among every person participating in the development of this document.

American National Standards Institute (ANSI) standards and guideline publications, of which the document contained herein is one, are developed through a voluntary consensus standards development process. This process brings together volunteers and/or seeks out the views of persons who have an interest in the topic covered by this publication. While NEMA administers the process and establishes rules to promote fairness in the development of consensus, it does not write the document and it does not independently test, evaluate, or verify the accuracy or completeness of any information or the soundness of any judgments contained in its standards and guideline publications.

NEMA disclaims liability for any personal injury, property, or other damages of any nature whatsoever, whether special, indirect, consequential, or compensatory, directly or indirectly resulting from the publication, use of, application, or reliance on this document. NEMA disclaims and makes no guaranty or warranty, express or implied, as to the accuracy or completeness of any information published herein, and disclaims and makes no warranty that the information in this document will fulfill any of your particular purposes or needs. NEMA does not undertake to guarantee the performance of any individual manufacturer or seller's products or services by virtue of this standard or guide.

In publishing and making this document available, NEMA is not undertaking to render professional or other services for or on behalf of any person or entity, nor is NEMA undertaking to perform any duty owed by any person or entity to someone else. Anyone using this document should rely on his or her own independent judgment or, as appropriate, seek the advice of a competent professional in determining the exercise of reasonable care in any given circumstances. Information and other standards on the topic covered by this publication may be available from other sources, which the user may wish to consult for additional views or information not covered by this publication.

NEMA has no power, nor does it undertake to police or enforce compliance with the contents of this document. NEMA does not certify, test, or inspect products, designs, or installations for safety or health purposes. Any certification or other statement of compliance with any health or safety–related information in this document shall not be attributable to NEMA and is solely the responsibility of the certifier or maker of the statement

This is a preview of "ANSI/NEMA C29.9-1983...". Click here to purchase the full version from the ANSI store.

AMERICAN NATIONAL STANDARD

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

Caution Notice: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Published by

National Electrical Manufacturers Association
1300 North 17th Street, Rosslyn, VA 22209

© Copyright 2013 by National Electrical Manufacturers Association
All rights reserved including translation into other languages, reserved under the Universal Copyright Convention, the Berne Convention for the Protection of Literary and Artistic Works, and the International and Pan American Copyright Conventions.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior written permission of the publisher.

Printed in the United States of America.

This is a preview of "ANSI/NEMA C29.9-1983...". Click here to purchase the full version from the ANSI store.

<This Page Intentionally Left Blank.>

This is a preview of "ANSI/NEMA C29.9-1983...". Click here to purchase the full version from the ANSI store.

FOREWORD

(This foreword is not part of American National Standard C29.9-1983 (R2002, R2012))

The first edition of this standard was essentially based on the EEI-NEMA Standard *Wet-Process Porcelain Insulators (Apparatus, Post Type*), EEI TDJ-59, NEMA 147-1956. (EEI is the Edison Electric Institute; NEMA is the National Electrical Manufacturers Association). It was developed by the American National Standards Committee on Insulators for Electric Power Lines, C29.

This standard has been revised three times by the C29 Committee. This third revision (1) makes numerous editorial changes deemed to improve clarity; (2) removes porcelain color as a requirement; (3) changes the test description for ferrous metal parts galvanizing; (4) moves packing requirements to an appendix; (5) requires electrical tests to be made on completely assembled insulators; (6) revises the mechanical proof test requirements; (7) increases routine test values to 50 percent of rating; and (8) adds optional routine cantilever and bending movement tests.

Suggestions for improvement of this standard will be welcome. They should be sent to the National Electrical Manufacturers Association, 1300 North 17th Street, Suite #1752, Rosslyn, VA 22209.

This standard was processed and approved for submittal to ANSI by Accredited Standards Committee on Insulators for Electric Power Lines, C29. 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:

Rob Christman, Chairman
Steve Griffith, Secretary

Organization Represented:	*Name of Representative:*
Edison Electric Institute	B. Freimark
	R. Christman
	E. Cleckley
	M. Garrels
	W. Avery
	J. Varner (alt)
	R. Kluge (alt)
	G. Obenchain (alt)
Institute of Electrical and Electronic Engineers	T. Grisham
	J. Hildreth
	A. Jagtiani
	J. Kuffel
	A. Phillips
	E. Gnandt (alt)
National Electrical Manufacturers Association	P. Maloney
	A. Baker
	R. A. Bernstorf
	G. Powell
	G. A. Stewart
	E. Kress (alt)
	Z. Lodi (alt)
	E. Niedospial (alt)
	A. Schwalm (alt)
Tennessee Valley Authority	J. Nelson
Western Area Power Administration	R. Clark

© Copyright 2013 by National Electrical Manufacturers Association

This is a preview of "ANSI/NEMA C29.9-1983...". Click here to purchase the full version from the ANSI store.

<This Page Intentionally Left Blank.>

© Copyright 2013 by National Electrical Manufacturers Association

This is a preview of "ANSI/NEMA C29.9-1983...". Click here to purchase the full version from the ANSI store.

TABLE OF CONTENTS

© Copyright 2013 by National Electrical Manufacturers Association

This is a preview of "ANSI/NEMA C29.9-1983...". Click here to purchase the full version from the ANSI store.

<This Page Intentionally Left Blank.>

© Copyright 2013 by National Electrical Manufacturers Association

This is a preview of "ANSI/NEMA C29.9-1983...". Click here to purchase the full version from the ANSI store.

AMERICAN NATIONAL STANDARD **ANSI/NEMA C29.9-1983 (R2002, R2012)**

Wet Process Porcelain Insulators—Apparatus, Post- Type

1 SCOPE

This standard covers outdoor high-voltage post- type apparatus insulators made of wet-process porcelain and used in the transmission and distribution of electrical energy.

2 DEFINITIONS

2.1 See section 2 of American National Standard Test Methods for Electrical Power Insulators, ANSI C29.1-1988 (R2012) for definitions of terms.

2.2 In this standard, the word *insulator* shall refer to a unit or to a stack of two or more units.

2.3 The technical reference numbers appearing in tables are a widely used and recognized identification series for apparatus insulator units or stacks.

3 GENERAL

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

3.2 Some insulators are tapered and may contain units that have certain characteristics whose strengths exceed those given in tables. Each unit shall comply with the manufacturers strength requirements.

3.3 Manufacturer’s drawings, if furnished, shall show the outline of the insulators, together with all pertinent dimensions. Any variations in these dimensions due to manufacturing tolerances shall be indicated.

4 MATERIAL

4.1 The insulators shall be made of good commercial-grade wet-process porcelain.

4.2 The entire porcelain surface of the insulators that will be exposed after assembly shall be glazed. The entire surface shall be relatively free from imperfections. Color is not a part of this standard. If gray is required, it shall be in accordance with ANSI Z55.1-1967 (R1973) and conform to Munsell notation 5BG 7.0/0.4 with the following tolerances:

1) Hue: ± 12 (3G to 7B)
2) Value: ± 0.5
3) Chroma: -0.2 to +0.6

4.3 Metal parts shall be made of a good commercial grade of malleable iron, ductile iron, steel, or aluminum. Ferrous parts other than stainless steel shall be galvanized in accordance with ASTM A153-80.

© Copyright 2013 by National Electrical Manufacturers Association