



# Standard Specification for Poly(Vinyl Chloride) Insulation for Wire and Cable, 60°C Operation<sup>1</sup>

This standard is issued under the fixed designation D2219; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

~~<sup>ε1</sup>Note—The text of 5.2, 5.4, and Note 1 of Table 2 was revised editorially October 2007.~~

## 1. Scope\*

1.1 This specification covers a thermoplastic insulation of poly(vinyl chloride) or the copolymer of vinyl chloride and vinyl acetate.

1.2 This insulation is recommended for use at conductor temperatures not in excess of 60°C in wet or dry locations at a maximum voltage rating of 600 V for power and control circuits.

~~1.3 Whenever two sets of values are presented, in different units, the values in the first set are standard, while those in parentheses are for information only.~~

~~1.4 In many instances the insulation material cannot be tested unless it has been formed around a conductor or cable. Therefore, tests are done on insulated wire or cable in this specification solely to determine the relevant property of the insulation material and not to test the conductor or completed cable.~~

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1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.4.1 In some cases (including the title), temperatures are described in degrees Celsius only.

## 2. Referenced Documents

2.1 *ASTM Standards*:<sup>2</sup>

D1711 [Terminology Relating to Electrical Insulation](#)

D2633 [Test Methods for Thermoplastic Insulations and Jackets for Wire and Cable](#)

## 3. Terminology

3.1 *Definitions*:

3.1.1 For definitions of terms used in this specification, refer to Terminology D1711.

3.2 *Definitions of Terms Specific to This Standard*:

3.2.1 *aging (act of), n*—exposure of materials to air or oil at a temperature and a time as specified in Table 1.

## 4. Physical Properties

4.1 The insulation shall conform to the requirements for physical properties prescribed in Table 1.

## 5. Electrical Requirements

5.1 Perform the ac voltage, insulation resistance, and dc voltage tests in that order when any of these tests are required. The sequence for other testing is not specified.

5.2 *AC Voltage Test*—Test the insulated conductor at the ac withstand voltage as specified in Table 2. ~~It is acceptable to Unless~~

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D09 on Electrical and Electronic Insulating Materials and is the direct responsibility of Subcommittee D09.18 on Solid Insulations, Non-Metallic Shieldings and Coverings for Electrical and Telecommunication Wires and Cables.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

\*A Summary of Changes section appears at the end of this standard.