



## Standard Specification for Poly(Vinyl Chloride) Jacket for Wire and Cable<sup>1</sup>

This standard is issued under the fixed designation D1047; 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.

*This standard has been approved for use by agencies of the Department of Defense.*

### 1. Scope\*

1.1 This specification covers a durable general-purpose thermoplastic jacket made from poly(vinyl chloride) or the copolymer of vinyl chloride and vinyl acetate suitable for a minimum installing temperature of  $-10^{\circ}\text{C}$ .

1.2 The values stated in inch-pound units are the standard, except in cases where SI units are more appropriate. The values in parentheses are for information only.

### 2. Referenced Documents

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

D1711 [Terminology Relating to Electrical Insulation](#)

D2565 [Practice for Xenon-Arc Exposure of Plastics Intended for Outdoor Applications](#)

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

D6360 [Practice for Enclosed Carbon-Arc Exposures of Plastics](#)

G23 [Practice for Operating Light-Exposure Apparatus \(Carbon-Arc Type\) With and Without Water for Exposure of Nonmetallic Materials](#) (~~Discontinued 2001~~)<sup>3</sup>

G151 [Practice for Exposing Nonmetallic Materials in Accelerated Test Devices that Use Laboratory Light Sources](#)

G152 [Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials](#)

G153 [Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials](#)

G155 [Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials](#)

### 3. Terminology

#### 3.1 Definitions:

3.1.1 For definitions pertinent to this specification, see Terminology D1711.

### 4. Test Applicable for Sunlight and Weather Resistant Materials

4.1 The jacket shall retain a minimum of 80 % of its unexposed tensile strength and elongation after 720 h of exposure in a dual carbon-arc apparatus or a Xenon arc light apparatus. Prepare the specimens in accordance with Test Methods D2633 for physical tests of insulations and jackets. Do not buff the surface that is exposed to the light source. Perform the test in accordance with Practice D2565 or Practice D6360, depending on which type of apparatus is used. Use Cycle 1 in Table X1.1 of Practice G153 or Cycle 1 in Table X3.1 of Practice G155, depending on which type of apparatus is used.

~~Note 1—Previous versions of this specification referenced carbon-arc devices described by Practice G23, which described very specific equipment designs. Practice G23 has been withdrawn and replaced by Practice G151, which describes performance criteria for all exposure devices that use laboratory light sources, and by Practice G152 and Practice G153, which give requirements for exposing nonmetallic materials in filtered open flame carbon-arc devices and enclosed carbon-arc devices, respectively.~~

<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.

<sup>3</sup> Withdrawn. The last approved version of this historical standard is referenced on [www.astm.org](http://www.astm.org).

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