



# Standard Specification for General-Purpose, Heavy-Duty, and Extra-Heavy-Duty Acrylonitrile-Butadiene/Poly(Vinyl Chloride) (NBR/PVC) Jackets for Wire and Cable<sup>1</sup>

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## 1. Scope

1.1 This specification covers durable, crosslinked black or colored acrylonitrile-butadiene/poly(vinyl chloride) (NBR/PVC) compounds suitable for use as outer coverings or jackets on electrical cables for general-purpose, heavy-duty, and extra-heavy-duty service.

1.2 General-purpose and heavy-duty jackets are not recommended for installation at a temperature lower than  $-25^{\circ}\text{C}$  and extra-heavy-duty jackets at a temperature lower than  $-10^{\circ}\text{C}$ .

1.3 Compounds are based on a fluxed blend of an acrylonitrile-butadiene synthetic rubber and poly(vinyl chloride) resin.

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

## 2. Referenced Documents

### 2.1 ASTM Standards:

D 470 Test Methods for Crosslinked Insulations and Jackets for Wire and Cable<sup>2</sup>

D 1499 Practice for Operating Light- and Water-Exposure Apparatus (Carbon-Arc Type) for Exposure of Plastics<sup>3</sup>

<sup>1</sup> This specification is under the jurisdiction of ASTM Committee D-9 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 Telecommunications Wires and Cables.

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<sup>2</sup> Annual Book of ASTM Standards, Vol 10.01.

<sup>3</sup> Annual Book of ASTM Standards, Vol 08.01.

G 23 Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials<sup>4</sup>

## 3. Test Applicable for Black Sunlight and Weather Resistant Materials

3.1 A black 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. Prepare the specimens in accordance with Test Methods D 470 for physical tests of insulations and jackets. Perform the test in accordance with Practice D 1499 using Method 1 of Practice G 23. This test is not applicable to colored jackets.

## 4. Physical Properties

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

## 5. Sampling

5.1 Unless otherwise specified, sample the jacket in accordance with Test Methods D 470.

## 6. Test Methods

6.1 Unless otherwise specified, test the jacket in accordance with Test Methods D 470.

## 7. Keywords

7.1 acrylonitrile-butadiene/poly(vinyl chloride) jacket; crosslinked jacket; extra-heavy-duty jacket; general-purpose jacket; heavy-duty jacket; rubber jacket

<sup>4</sup> Annual Book of ASTM Standards, Vol 14.02.