Designation: D 2768 – 95

An American National Standard

Standard Specification for General-Purpose Ethylene-Propylene Rubber Jacket for Wire and Cable[1]

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1. Scope

1.1 This specification covers a weather and ozone-resisting crosslinked compound for use as the outer covering or jacket on insulated wires and cables. The polymer component of this material consists substantially of ethylenepropylene copolymer (EPM) or ethylene-propylene terpolymer (EPDM).

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:*

D 257 Test Methods for D-C Resistance or Conductance of Insulating Materials[2]

D 470 Test Methods for Crosslinked Insulations and Jackets for Wire and Cable[2]

D 1499 Practice for Operating Light- and Water-Exposure Apparatus (Carbon–Arc Type) for Exposure of Plastics[3]

G 23 Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials[4]

3. Electrical Requirements

3.1 When used on single conductor nonshielded cables rated 2001 through 5000 V phase to phase, the jacket shall meet the following requirements of Test Methods D 470:

3.1.1 *Surface Resistivity*—The jacket shall have a surface resistivity equal to or greater than 200 000 MΩ.

3.1.2 *U-Bend Discharge*—There shall be no cable failure nor cracks in the jacket when a sample of completed cable is subjected to the U-bend discharge test at 150 V/mil (6 kV/mm) for at least 6 h.

4. Test Applicable for Sunlight and Weather Resistant Materials

4.1 The jacket shall retain a minimum of 80 % of its unaged 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.

5. Physical Requirements

5.1 The crosslinked jacket shall conform to the physical properties specified in Table 1.

6. Sampling

6.1 Sample the jacket in accordance with Test Methods D 470.

7. Test Methods

7.1 Unless otherwise instructed, test the jacket in accordance with Test Methods D 470.

8. Keywords

8.1 ethylene-propylene rubber; sunlight resistant; surface resistivity; U-bend discharge; weather resistant

[1] 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 Shielding, and Coverings for Electrical and Telecommunications Wires and Cables.

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[2] *Annual Book of ASTM Standards*, Vol 10.01.

[3] *Annual Book of ASTM Standards*, Vol 08.01.

[4] *Annual Book of ASTM Standards*, Vol 14.02.