



Standard Test Methods for Physical and Environmental Performance Properties of Insulations and Jackets for Telecommunications Wire and Cable¹

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1. Scope

1.1 These test methods cover procedures for the physical testing of thermoplastic insulations and jackets used on telecommunications wire and cable and the testing of physical characteristics and environmental performance properties of completed products. To determine the procedure to be used on the particular insulation or jacket or on the completed wire or cable, reference should be made to the specification for that product.

1.2 The test methods appear in the following sections of this standard:

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¹ These test methods are under the jurisdiction of ASTM Committee D-9 on Electrical and Electronic Insulating Materials and are the direct responsibility of Subcommittee D09.18 on Solid Insulations, NonMetallic Shieldings and Coverings for Electrical and Telecommunications Wires and Cables.

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Water penetration test (filled core wire and cable only)	41
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1.3 The values stated in inch-pound units are to be regarded as the standard except where only SI units are given.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* For specific caution statement see 19.1.

2. Referenced Documents

2.1 ASTM Standards:

- D 471 Test Method for Rubber Property—Effect of Liquids²
- D 638 Test Method for Tensile Properties of Plastics³
- D 1238 Test Method for Flow Rates of Thermoplastics by Extrusion Plastometer³
- D 1248 Specification for Polyethylene Plastics Molding and Extrusion Materials³
- D 1693 Test Method for Environmental Stress-Cracking of Ethylene Plastics³
- D 2633 Test Methods for Thermoplastic Insulations and Jackets for Wire and Cable⁴
- D 3032 Test Methods for Hookup Wire Insulation⁴
- D 3895 Test Method for Oxidative Induction Time of Polyolefins by Differential Scanning Calorimetry⁵
- D 4731 Specification for Hot-Application Filling Compounds for Telecommunications Wire and Cable⁴
- D 4732 Specification for Cool-Application Filling Compounds for Telecommunications Wire and Cable⁴

² *Annual Book of ASTM Standards*, Vol 09.01.

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

⁴ *Annual Book of ASTM Standards*, Vol 10.02.

⁵ *Annual Book of ASTM Standards*, Vol 08.02.