



Standard Specification for Unused Rope with Special Electrical Properties¹

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1. Scope

1.1 This specification covers the requirements, sizes, construction, tests, and procedures for unused ropes for use by electrical utilities and related industries on energized lines operating at voltages higher than 1 kV.

1.2 This specification covers the minimum electrical, mechanical, and physical properties guaranteed by the manufacturer and the detailed procedures by which such properties are to be determined. The purchaser has the option to perform or have performed any of these tests in order to verify the guarantee. Claims for failure to meet the specification are subject to verification by the manufacturer.

1.3 The rope to which this specification applies is designed to be used in a clean and dry condition, on or near energized lines.

1.4 A margin of safety shall be allowed between the maximum voltage and working distances on which it is used and the test voltage and lengths at which it is tested.

1.5 It is common practice for the user of this type of equipment to prepare complete instructions and regulations to govern in detail the correct and safe use of such equipment.

1.6 The use and maintenance of this equipment is beyond the scope of this specification.

1.7 The values stated in SI units are to be regarded as the standard.

1.8 The following safety hazards caveat pertains only to the test method portion, Section 11, of this specification: *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.* The test levels used in this standard are for testing under laboratory conditions and are not to be regarded as safe use levels.

¹ This specification is under the jurisdiction of ASTM Committee F18 on Electrical Protective Equipment for Workers and is the direct responsibility of Subcommittee F18.35 on Tools & Equipment.

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2. Referenced Documents

2.1 ASTM Standards:²

C1500 Test Method for Nondestructive Assay of Plutonium by Passive Neutron Multiplicity Counting

D1125 Test Methods for Electrical Conductivity and Resistivity of Water

D4268 Test Methods for Testing Fiber Ropes (Withdrawn 2002)³

E4 Practices for Force Verification of Testing Machines

F711 Specification for Fiberglass-Reinforced Plastic (FRP) Rod and Tube Used in Live Line Tools

2.2 IEEE Standards:⁴

IEEE Std 4 Standard Techniques for High Voltage Testing

2.3 Other Standard:⁵

Cordage Institute CI-1301 Polypropylene Fiber Rope 3-Strand and 8-Strand Constructions (April 1999)

3. Terminology

3.1 *General*—The terms used in this specification are common to and well known by the industries that will be using them.

4. Ordering Information

4.1 Orders for rope under this specification should include the following information:

4.2 Manufacturer's designation of the rope.

4.3 *Length of Coil or Reel*:

4.3.1 *Lengths*—Each package shall be continuous throughout without splices or knots. Ends shall be taped, heat sealed, or served to prevent unraveling.

5. Physical Properties

5.1 *Hardness*—Refer to 11.5.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from Institute of Electrical and Electronics Engineers, Inc. (IEEE), 445 Hoes Ln., P.O. Box 1331, Piscataway, NJ 08854-1331.

⁵ Available from The Cordage Institute, 994 Old Eagle School Rd., Suite 1019, Wayne, PA 19087.