



Standard Test Methods for Vulcanized Fibre Used for Electrical Insulation¹

This standard is issued under the fixed designation D619; 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 (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope*

1.1 These test methods cover the procedures for testing vulcanized fibre sheets, tubes, and rods of such grades as can be used for electrical insulation.

1.2 The procedures appear in the following sections:

Procedure	Section
Arc resistance	23
Ash	6
Bond strength (ply adhesion)	16
Bursting strength	14
Compressive strength	12, 25, 30
Conditioning	4
Density	17, 26, 32
Dielectric strength	18, 27
Dimensional measurements	28, 33
Flammability	22
Flexural strength	13, 31
Silica	7
Tearing strength	11
Tensile strength	10, 24, 29
Thickness (sheets)	20
Resistance to impact	15
Rockwell hardness	19
Volatile matter	8
Water absorption	5
Zinc chloride	9

1.3 The values stated in inch-pound units are to be regarded as the standard. The SI values given in parentheses are for information only.

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.* Specific hazard statements are given in 7.3, 22.1, 22.2.

NOTE 1—The test methods described herein are similar technically to those described in IEC Publication 60667-2. Not all of the tests in this document are included in IEC 60667-2, and the procedures in the two publications are not completely identical; but it is expected that comparable results will be obtained from most of the procedures. Conduct comparative tests if necessary before directly comparing results of tests

using the different procedures.

2. Referenced Documents

2.1 *ASTM Standards*:²

- D149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies
- D202 Test Methods for Sampling and Testing Untreated Paper Used for Electrical Insulation
- D229 Test Methods for Rigid Sheet and Plate Materials Used for Electrical Insulation
- D256 Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics
- D348 Test Methods for Rigid Tubes Used for Electrical Insulation
- D349 Test Methods for Laminated Round Rods Used for Electrical Insulation
- D374 Test Methods for Thickness of Solid Electrical Insulation (Withdrawn 2013)³
- D495 Test Method for High-Voltage, Low-Current, Dry Arc Resistance of Solid Electrical Insulation
- D570 Test Method for Water Absorption of Plastics
- D668 Test Methods of Measuring Dimensions of Rigid Rods and Tubes Used for Electrical Insulation
- D689 Test Method for Internal Tearing Resistance of Paper (Withdrawn 2009)³
- D695 Test Method for Compressive Properties of Rigid Plastics
- D710 Specification for Vulcanized Fibre Sheets, Rods, and Tubes Used for Electrical Insulation
- D785 Test Method for Rockwell Hardness of Plastics and Electrical Insulating Materials
- D792 Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement
- D828 Test Method for Tensile Properties of Paper and Paperboard Using Constant-Rate-of-Elongation Apparatus (Withdrawn 2009)³

¹ These test methods are under the jurisdiction of ASTM Committee D09 on Electrical and Electronic Insulating Materials and are the direct responsibility of Subcommittee D09.07 on Flexible and Rigid Insulating Materials

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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.

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