Designation: D 178 – 01$^{\epsilon 1}$

Standard Specification for Rubber Insulating Matting[1]

This standard is issued under the fixed designation D 178; 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.

This standard has been approved for use by agencies of the Department of Defense.

ϵ[1] NOTE—A precision and bias statement was added editorially in May 2004.

1. Scope

1.1 This specification covers acceptance testing of rubber insulating matting for use as a floor covering for protection of workers.

1.2 Two types of matting, differing in chemical and physical characteristics, are provided and are designated as Type I and Type II matting.

1.3 The following safety hazards caveat applies only to the test method portion, Sections 17 to 19, 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.*

NOTE 1—Rubber insulating matting should remain flexible for use through normal temperature ranges.

NOTE 2—Rubber as used in this specification is a generic term that includes elastomers and elastomer compounds, regardless of origin.

2. Referenced Documents

2.1 *ASTM Standards:*

D 149 Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies [2]

D 297 Test Methods for Rubber Products—Chemical Analysis [3]

D 412 Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers—Tension [3]

D 471 Test Method for Rubber Property—Effect of Liquids [3]

D 518 Test Method for Rubber Deterioration—Surface Cracking [3]

D 570 Test Method for Water Absorption of Plastics [4]

D 573 Test Method for Rubber Deterioration in an Air Oven [3]

D 1692 Test Method for Rate of Burning or Extent and Time of Burning of Cellular Plastics Using a Specimen Supported by a Horizontal Screen [5]

2.2 *American National Standard:*[6]

ANSI C84.1 Voltage Ratings for Electric Power Systems and Equipment (60 Hz)

3. Terminology

3.1 *Definitions:*

3.1.1 *user, n—as used in 4.3.1,* the entity employing the actual worker(s) utilizing the equipment; if no separate employer, then the individual.

3.1.2 *voltage, maximum retest, n*—voltage, either ac rms or dc avg, which is equal to the proof-test voltage for new protective equipment.

3.1.3 *voltage, retest, n*—voltage, either ac rms or dc avg, that used protective equipment must be capable of withstanding for a specified test period without breakdown.

3.1.4 *voltage, nominal design, n*—a nominal value consistent with the latest revision of ANSI C84.1, assigned to the circuit or system for the purpose of conveniently designating its voltage class.

3.1.5 *voltage, maximum use, n*—the ac voltage (rms) classification of the protective equipment that designates the maximum nominal design voltage of the energized system that may be safely worked. The nominal design voltage is equal to phase-to-phase voltage on multiphase circuits.

3.1.5.1 If there is no multiphase exposure in a system area, and the voltage exposure is limited to phase (polarity on dc systems) to ground potential, the phase (polarity on dc systems) to ground potential shall be considered to be the nominal design voltage.

[1] This specification is under the jurisdiction of ASTM Committee F18 on Electrical Protective Equipment for Workers and is the direct responsibility of Subcommittee F18.25 on Insulating Cover-Up Equipment. This standard replaces ANSI Standard J 6.7, which is no longer available.

Current edition approved March 10, 2001. Published May 2001. Originally published as D178 – 23 T. Last previous edition D178 – 93 (1998).

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

[3] *Annual Book of ASTM Standards,* Vol 09.01.

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

[5] Discontinued January 1978; see the 1977 *Annual Book of ASTM Standards,* Part 36.

[6] Available from American National Standards Institute, 11 West 42nd Street, 13th Floor, New York, NY 10036.

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