



Designation: D1049 – 98 (Reapproved 2022)

Standard Specification for Rubber Insulating Covers¹

This standard is issued under the fixed designation D1049; 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 U.S. Department of Defense.

1. Scope

1.1 This specification covers acceptance testing of rubber insulating covers for use as portable protective devices for protection of workers from accidental contact with live electrical conductors, apparatus, or circuits. It includes insulator hoods, dead-end protectors, line hose connectors, cable end covers, and miscellaneous covers. The electrical, physical, and chemical requirements of this specification shall apply also to any new or modified styles of covers that may be developed for specific purposes.

1.2 Three types of covers, differing in chemical and physical characteristics, are provided, and are designated as Type I, non-resistant to ozone, and Type II and Type III, resistant to ozone.

1.3 Five classes of covers, differing in electrical characteristics, are provided, and are designated as Class 0, Class 1, Class 2, Class 3, and Class 4.

1.4 Five styles of covers, differing in design characteristics, are provided, and are designated as Style A, Style B, Style C, Style D, and Style E.

NOTE 1—Because of the use requirements some covers are semi-rigid and others flexible. The flexible devices should remain suitably flexible for application and removal through normal temperatures of –29 °C to 54.5 °C (–20 °F to 130 °F).

1.5 *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, health, and environmental practices and determine the applicability of regulatory limitations prior to use. See 18.2 for a specific cautionary statement.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recom-*

mendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

2.1 *ASTM Standards:*²

D297 Test Methods for Rubber Products—Chemical Analysis

D412 Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension

D573 Test Method for Rubber—Deterioration in an Air Oven

3. Terminology

3.1 *Definitions of Terms Specific to This Standard:*

3.1.1 *breakdown*—the electrical discharge or arc occurring between the electrodes and through the equipment being tested.

3.1.2 *flashover*—the electrical discharge or arc occurring between electrodes and over or around, but not through, the equipment being tested.

3.1.3 *ozone*—a very active form of oxygen that may be produced by corona, arcing, or ultraviolet rays.

3.1.4 *ozone cutting and checking*—the cutting action produced by ozone on rubber under mechanical stress into a series of interlacing cracks.

3.1.5 *rubber*—a generic term that includes elastomers and elastomeric compounds, regardless of origin.

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

3.1.7 *voltage, maximum use*—the ac voltage (rms) rating 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 the phase to phase voltage on multiphase circuits.

3.1.7.1 *Discussion*—If there is no multiphase exposure in a system area and the voltage exposure is limited to phase

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 J6.2, which is no longer available.

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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.