



Standard Specification for Rubber Insulating Line Hose¹

This standard is issued under the fixed designation D 1050; 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.

1. Scope

1.1 This specification covers acceptance testing of rubber insulating line hose for use as a portable protective device for protection of workers from accidental contact with live electrical conductors.

1.2 Two types of line hose 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 line hose, differing in electrical characteristics, are provided and are designated as Class 0, Class 1, Class 2, Class 3, and Class 4.

1.4 Four styles of line hose, differing in design characteristics, are provided and are designated as Style A, Style B, Style C, and Style D.

NOTE 1—Rubber insulating line hose should remain suitably flexible for application and removal through normal working temperatures of –29 to 54.5 °C (–20 to 130°F).

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

1.5 The following precautionary caveat pertains only to the test method portion, Sections 16, 17, 18, 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.* For specific precautionary statements, see 18.1.1.

2. Referenced Documents

2.1 ASTM Standards:

D 297 Test Methods for Rubber Products—Chemical Analysis²

D 412 Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers—Tension²

D 570 Test Method for Water Absorption of Plastics³

¹ This specification is under the jurisdiction of ASTM Committee F-18 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 6.1, which is no longer available.

Current edition approved Nov. 30, 1990. Published January 1991. Originally published as D 1050 – 49 T. Last previous edition D 1050 – 85 ^{ε1}.

² Annual Book of ASTM Standards, Vol 09.01.

³ Annual Book of ASTM Standards, Vol 08.01.

D 573 Test Method for Rubber—Deterioration in an Air Oven²

D 624 Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers²

2.2 Federal Specification:

PPP-B-636 Box, Shipping, Filterboard⁴

2.3 ANSI Standard:

C 84.1 Electric Power Systems and Equipment—Voltage Ratings⁵

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 *electrical testing facility*—a location with qualified personnel, testing equipment, and procedures for the inspection and electrical testing of electrical insulating protective equipment.

3.1.4 *electrode clearance*—the shortest path from the energized electrode to the ground electrode.

3.1.5 *insulated*—separated from other conducting surfaces by a dielectric substance (including air space) offering a high resistance to the passage of current.

NOTE 3—When any object is said to be insulated, it is understood to be insulated in a suitable manner for the conditions to which it is subjected. Otherwise, it is, within the purpose of this definition, uninsulated. Insulating covering of conductors is one means of making the conductor insulated.

3.1.6 *isolated*—an object that is not readily accessible to persons unless special means of access are used.

3.1.7 *ozone*—a very active form of oxygen that may be produced by corona, arcing, or ultra-violet rays.

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

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

⁴ Available from Standardization Documents, Order Desk, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, ATTN: NPODS.

⁵ Available from American National Standards Institute, 11 West 42nd Street, 13th Floor, New York, NY 10036.