



Standard Specification for In-Service Care of Insulating Gloves and Sleeves¹

This standard is issued under the fixed designation F 496; 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 This specification covers the in-service care, inspection, testing, and use voltage of insulating gloves and sleeves for protection from electrical shock.

1.2 The following safety hazards caveat pertains only to the test method portion, Sections 6 and 7, 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.*

2. Referenced Documents

2.1 ASTM Standards:

D 120 Specification for Rubber Insulating Gloves²

D 1051 Specification for Rubber Insulating Sleeves²

D 2865 Practice for Calibration of Standards and Equipment for Electrical Insulating Materials Testing³

F 696 Specification for Leather Protectors for Rubber Insulating Gloves and Mittens²

F 819 Definitions of Terms Relating to Electrical Protective Equipment for Workers²

F 1236 Guide for Visual Inspection of Electrical Protective Rubber Products²

2.2 ANSI Standards:

C 39.5 Safety Requirements for Electrical and Electronic Measuring and Controlling Instrumentation⁴

C 84.1 Voltage Ratings for Electric Power Systems and Equipment⁴

2.3 IEEE Standard:

4-78 Techniques for High Voltage Testing⁵

3. Significance and Use

3.1 Compliance with this specification should continue to provide personnel with insulating gloves and sleeves of known

and acceptable quality after initial acceptance in accordance with Specifications D 120 and D 1051. The specifications herein are to be considered as minimum requirements.

3.2 A margin of safety shall be provided between the maximum use voltage and the voltage at which the gloves and sleeves are retested. The relationship between retest voltage and maximum use voltage at which the gloves and sleeves shall be used is shown in Table 1.

3.2.1 When work is not being performed on energized conductors or equipment, or both, any contact with energized conductors or equipment, or both, would be limited to the phase-to-ground potential. If gloves are the only protection used in such operations, the phase-to-ground voltage to which the gloves may be exposed shall be limited to the maximum use voltage of that class glove as listed in Table 1.

3.3 The user of these types of protective equipment shall be knowledgeable of and instructed in the correct and safe inspection and use of such equipment.

4. Terminology

4.1 Definitions:

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

4.1.2 *designated person*—an individual who is qualified by experience or training to perform an assigned task.

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

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

4.1.5 *gauntlet*—the area of a glove between the wrist and the reinforced edge of the opening. (See Fig. 1.)

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

NOTE 1—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.

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

4.1.8 *ozone*—a very active form of oxygen that may be

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 F18.50 on In-Service Integrity.

Current edition approved July 10, 1999. Published September 1999. Originally published as F 496 – 77. Last previous edition F 496 – 97.

² Annual Book of ASTM Standards, Vol 10.03.

³ Annual Book of ASTM Standards, Vol 10.02.

⁴ Available from American National Standards Institute, 1430 Broadway, New York, NY 10018.

⁵ Available from the Institute of Electrical and Electronics Engineers, Inc., 345 East 47th St., New York NY 10017.