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Standard Terminology Relating to Electrical Protective Equipment for Workers¹

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1. Referenced Documents

1.1 ASTM Standards:

F 1116 Test Method for Determining Dielectric Strength of Dielectric Footwear

F 1117 Specification for Dielectric Footwear

2. Terminology

afterflame time, *n*—the length of time in seconds for which a material continues to flame after the ignition source has been removed..

DISCUSSION—*In arc testing*, the length of time for which a specimen continues to exhibit a visible flaming as determined by a time display video recording of the specimen during arc testing

arc duration, *n*—time duration of the arc(s).

arc energy (vi dt), *n*—sum of the instantaneous arc voltage values multiplied by the instantaneous arc current values multiplied by the incremental time values during the arc, (J).

arc gap—distance between the arc electrodes (inch).

Arc thermal performance value (ATPV), *n*—*in arc testing*, the incident energy on a fabric or material that results in a 50 % probability that sufficient heat transfer through the tested specimen is predicted to cause the onset of a second-degree skin burn injury based on the Stoll curve..

arc voltage, *n*—voltage across the gap caused by the current flowing through the resistance created by the arc gap, *V*.

asymmetrical arc current, *n*—the total arc current produced during closure; it includes a direct component and a symmetrical component, *A*.

blanket roll-up—a container made from fabric or similar material and specifically designed to protect the blanket from damage during storage or transportation.

blowout, *n*—the extinguishing of the arc caused by a magnetic field.

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

bulk storage—the storage of hose or covers together with one or more layers piled neatly, but without the benefit of spacers, supports, or special protective containers.

charring, *n*—the formation of carbonaceous residue as the result of pyrolysis or incomplete combustion.

closure, *n*—point on supply current wave form where arc is initiated.

color splash—a splash, smear, or streak of contrasting color evident on the inside or outside surface of the gloves or sleeves that was deposited during the dipping operation and is vulcanized into the material as part of the homogenous compound.

compatible—not injurious to or changing the physical or electrical characteristics of the blankets or affecting their application, use, or acceptability.

cover—an electrically insulated enclosure designed to be installed temporarily on various types of irregularly shaped electrical equipment to protect personnel and equipment working in close proximity.

delta peak temperature, *n*—difference between the maximum temperature and the initial temperature of the sensor during the test, °C.

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

distorted—physically changed from the natural and original shape, caused by stress of any type.

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

electrode—the energized or grounded conductor portion of electrical test equipment which is placed near or in contact with the material or equipment being tested.

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

embrittlement, *n*—the formation of a brittle residue as the result of pyrolysis or incomplete combustion.

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

foot portion—the portion of the footwear below the wearer's ankle bone.

¹ These definitions are under the jurisdiction of ASTM Committee F18 on Electrical Protective Equipment for Workers and are the direct responsibility of Subcommittee F18.60 on Terminology.

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