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Standard Specification for Flame-Resistant Materials Used in Camping Tentage¹

This standard is issued under the fixed designation D 4372; 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 evaluation of the flame resistance of fabric and other pliable materials used in camping tentage.

1.2 It provides for certification of materials by suppliers and for labeling programs to caution the user against actions detrimental to flame-retardant treated fabrics. It also facilitates the identification of tentage as being constructed of flame-resistant materials, and it identifies the manufacturer.

1.3 This standard should be used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.

1.4 The following precautionary caveat pertains only to the test method portion, Sections 8 and 9, of this specification:

1.5 *This standard does not purport to address all of the safety problems, 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 123 Terminology Relating to Textiles²

D 1776 Practice for Conditioning Textiles for Testing²

D 4391 Terminology Relating to the Burning Behavior of Textiles³

G 23 Test Method for Measuring Humidity with a Psychrometer (The Measurement of Wet-Bulb and Dry-Bulb Temperatures)⁴

3. Terminology

3.1 Definitions:

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

3.1.2 *camping tentage*—any portable temporary shelter or

structure designed to protect persons from the elements, all or a portion of the covering of which is made of fabric or other pliable materials.

3.1.2.1 *Discussion*—The term “camping tentage” includes but is not limited to; camping tents, play tents, recreational vehicle awnings, dining flies, and canopies, fabric screen houses, add-a-rooms, and ice fishing tents.

3.1.3 *flame resistance, n*—the property of a material whereby flaming combustion is prevented, terminated, or inhibited following application of a flaming or nonflaming source of ignition, with or without subsequent removal of the ignition source.

3.1.3.1 *Discussion*—Flame resistance can be inherent property of the basic material or product, or it may be imparted by specific treatment. The degree of flame resistance exhibited by a specific material during testing may vary with different test conditions.

3.1.4 *flame resistant, adj*—having flame resistance.

3.1.4.1 *Discussion*—“Flame resistant” is the mandated description for certain products that meet established conformance standards or specifications when the product is tested by a specific method. Where no conformance standards exist, “flame resistant” is a relative term and is used to compare one material to another.

3.1.5 *glow, n*—visible, flameless combustion of the solid phase of a material.

3.1.5.1 *Discussion*—A solid may both glow and give off combustibles that burn in the gas phase (that is, flame) but the two are not necessarily interdependent. Aspects of glow not involving combustion are defined in dictionaries of general terms.

3.1.6 For definitions of terms relating to burning behavior, refer to Terminology D 4391. For definitions of other textile terms used in this specification, refer to Terminology D 123.

3.2 Description of Terms Specific to This Standard:

3.2.1 *flooring materials*—any pliable planer structure used as a base surface in camping tentage, but excluding such things as rugs or carpets placed in the tent that are not integral parts of the item.

3.2.2 *wall and top material*—any pliable planer structure used as a nonbase surface in camping tentage including roofs, sides, windows, screens, doors, awnings, flies, and canopies.

4. Physical Requirements

4.1 *Flame Resistance of Flooring*—When subjected to the test described in Section 8, no specimen from a sample unit of flooring material shall be damaged within 1.0 in. (25 mm) of the edge of the hole in the flattening frame. This requirement includes specimens that were unleached and

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² Annual Book of ASTM Standards, Vol 07.01.

³ Annual Book of ASTM Standards, Vol 07.02.

⁴ Annual Book of ASTM Standards, Vol 06.01.