Designation: F 1646 – 03ε1

Standard Terminology Relating to Safety and Traction for Footwear[1]

This standard is issued under the fixed designation F 1646; 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.

ε[1] NOTE—Per Committee F13 Bylaws, editorially transferred approved terms from other F13 standards in January 2004.

1. Scope

1.1 This terminology standard covers terminology used in safety and traction for footwear and related material.

1.2 Words adequately defined in standard dictionaries are not included. Included are words that are particular to this industry.

NOTE 1—The following standards are currently under the jurisdiction of ASTM Committee F13 on Safety and Traction for Footwear and are included in 2.1: Test Methods F 489, F 609, and F 694; Practices F 695 and F 1637; and Guides F 802 and F 1240.

2. Referenced Documents

2.1 *ASTM Standards:* [2]

D 5859 Test Method for Determining the Traction of Footwear on Painted Surfaces Using the Variable Incidence Tester

F 489 Test Method for Using a James Machine[2]

F 609 Test Method for Using a Horizontal Pull Slipmeter (HPS)

F 694 Test Method for Heel-Attaching Strength of Women's Shoes

F 695 Practice for Ranking of Test Data Obtained for Measurement of Slip Resistance of Footwear Sole, Heel, or Related Materials

F 802 Guide for Selection of Certain Walkway Surfaces When Considering Footwear Traction

F 1240 Guide for Ranking Footwear Bottom Materials on Contaminated Walkway Surfaces According to Slip Resistance Test Results

F 1637 Practice for Safe Walking Surfaces

F 1694 Guide for Composing Walkway Surface Evaluation and Incident Report Forms for Slips, Stumbles, Trips and Falls

3. Terminology

adhesion, *n*—the tendency of one surface to adhere to another surface prior to movement due to dwell time, as well as other factors.

arch, *n*—the bony framework of the foot extending from the heel to the toes and sustained by the muscles and ligaments in the form of an arch. Also, the bottom curve of a shoe last from heel to ball.

barefoot, *adv or adj*—with the feet uncovered or unclothed; without shoes or stockings.

bollard, *n*—a thick, low, short, post, often of iron or steel and usually used in series, provided for the purpose of excluding or diverting motor vehicles from a road, lawn, or path. **F 1637**

breast, *n*—the forward or front face of a shoe heel.

carpet, *n*—permanently secured fibrous floor covering.

DISCUSSION—Area rugs, mats, and runners are not considered to be carpet for the purpose of this practice. **F 1637**

clean, *n*—free from visible or tactile contamination.

coating, *n*—a layer of any substance intentionally applied to a surface to modify its functional or decorative characteristics.

coefficient-of-friction (COF or μ), *n*—a dimensionless number: the ratio of two forces acting at the interface of two contacting solid bodies. The force used in the numerator is parallel to the surfaces and the force used in the denominator is perpendicular (normal) to the surfaces. See also *dynamic coefficient of friction*.

coefficient of friction (COF), *n*—the ratio of the horizontal component of force (parallel to the walkway surface and passing through the tester center of gravity) required to overcome the friction to the normal component of the vertical force (weight) of the object. **D 5859**

coefficient of friction, *n*—the ratio of the frictional force to the force, usually gravitational, acting perpendicular to the two surfaces in contact. This coefficient is a measure of the relative difficulty with which the surface of one material will slide over an adjoining surface of itself, or of another material. The static or starting coefficient of friction (μ_s) is related to the force measured to begin movement of the surfaces relative to each other. The kinetic or sliding

[1] This terminology is under the jurisdiction of ASTM Committee F13 on Safety and Traction for Footwear and is the direct responsibility of Subcommittee F13.91 on Terminology.

Current edition approved Aug. 10, 2003. Published Aug. 2003. Originally approved in 1995. Last previous edition approved in 2002 as F 1646 – 02.

[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.