



Designation: F 1646 – 05

## Standard Terminology Relating to Safety and Traction for Footwear<sup>1</sup>

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 ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 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*:<sup>2</sup>

F 489 Test Method for Using a James Machine<sup>3</sup>

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, and 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

### 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.

<sup>1</sup> This terminology is under the jurisdiction of ASTM Committee F13 on Pedestrian/Walkway Safety and Footwear and is the direct responsibility of Subcommittee F13.91 on Editorial and Terminology.

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<sup>2</sup> 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.

<sup>3</sup> Withdrawn.

**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.

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

**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  $\mu$ )**, *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*.

**contaminant**, *n*—any substance between and not a part of either of the two surfaces; *contaminant, contaminating, contamination*.

**contamination**, *n*—any undesirable solid or liquid material that rests upon a surface or exists between two mating surfaces; *contaminant, contaminating*.

**contra lateral**, *adj*—located, occurring, or acting on the opposite side of the body.

**dwell time**, *n*—the duration of time beginning at the instant a tribometer's test foot is placed upon the surface to be tested, and ending at the instant a shear force is applied to the sensor.

**dynamic coefficient of friction (DCOF)**, *n*—a coefficient of friction,  $\mu_d$ , obtained during relative translation between two contacting solid bodies; used interchangeably with *kinetic coefficient of friction*.

**fall**, *n*—undesirable descent due to the force of gravity, usually from a standing posture or during ambulation, to a lower level, usually the ground or floor.

**fit**, *n*—the ability of the shoe or hosiery to conform to the size, width, shape, and proportion of the foot.

**floor surface**, *n*—See *walkway surface*.

**footwear**, *n*—wearing apparel for the feet (such as shoes, boots, slippers, or overshoes), excluding hosiery.

**foxing**, *n*—a piece of material applied to the upper or extending around the outsole of a boot or shoe.