Designation: F695 – 01 (Reapproved 2009)

# Standard Practice for Ranking of Test Data Obtained for Measurement of Slip Resistance of Footwear Sole, Heel, and Related Materials[1]

This standard is issued under the fixed designation F695; 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 practice covers the ranking of slip resistance of footwear sole, heel, or related materials on various walkway surfaces.

1.2 *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:*[2]

F1646 Terminology Relating to Safety and Traction for Footwear

## 3. Terminology

3.1 *Definitions:*

3.1.1 For definitions of terms used in this practice, refer to Terminology F1646.

## 4. Procedure

4.1 Test one sample each of several representative walkway materials in accordance with any test method within the jurisdiction of ASTM Committee F13.

4.2 Select walkway samples on the basis of the type of footwear anticipated for use or being investigated.

4.3 For the purpose of comparison and ranking, select a reference footwear sole or heel material.

4.4 Test the selected material (4.3) on all walkway samples in accordance with the appropriate standard test method. Dry, wet, smooth, or rough walkway samples shall be tested only when permitted by the appropriate test method.

4.5 Test materials and designs intended for use as footwear soles or heels as prescribed in 4.4.

4.6 Make all measurements in 4.4 and 4.5 on the same day, in the same room, with the same machine, and using the same machine operator.

4.7 Record the average value required by the appropriate test method of each footwear sole or heel material and design on each walkway material.

4.8 Tabulate the average values in columns for walkway materials and rows for footwear sole or heel materials.

4.9 Starting with the number “1”, assign a rank value in each column for each average value, with “1” showing the highest average slip resistance, “2” showing the next highest average slip resistance, and so forth.

4.10 Tabulate the rank numbers in columns for walkway materials and rows for footwear sole or heel materials (see Table 1).

4.11 Add the rank numbers for each combination of footwear sole or heel material and walkway surface.

4.12 The lowest total rank value has the highest overall slip resistance. The rank value for each walkway material will indicate inconsistencies with the overall ranking. A high ranking value does not necessarily indicate a poor slip-resistant footwear material, since average test values may show high slip resistance for all materials tested on a given walkway material.

## 5. Keywords

5.1 shoe heel; shoe soling; slip resistance; walkway surfaces

[1] This practice is under the jurisdiction of ASTM Committee F13 on Pedestrian/Walkway Safety and Footwear and is the direct responsibility of Subcommittee F13.30 on Footwear.

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[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.

**TABLE 1 Ranking Footwear Materials on Various Walkway Surfaces**

| | Walkway Material A | Walkway Material B | Walkway Material C | Total Rank Value |
|---|---|---|---|---|
| Reference Sample | 1 | 2 | 1 | 4 |
| Footwear Sample X | 3 | 1 | 2 | 6 |
| Footwear Sample Y | 2 | 4 | 3 | 9 |
| Footwear Sample Z | 4 | 3 | 4 | 11 |