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Standard Guide for ~~Categorizing Results of~~ Ranking Footwear ~~Slip Resistant Measurements~~ Bottom Materials on Contaminated Walkway Surfaces ~~with an Interface of Various Foreign Substances~~ According to Slip Resistance Test Results[1]

This standard is issued under the fixed designation F 1240; 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—Editorial corrections were made throughout in August 1998.~~

[1] This guide is under the jurisdiction of ASTM Committee F~~=~~13 on Safety and Traction for Footwear and is the direct responsibility of Subcommittee F13.~~1~~50 on ~~Traction.~~ Walkway Safety Practices.

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1. Scope

1.1 This guide ~~is intended primarily to assist in the selection of work footwear where the presence of foreign materials may produce the danger of~~ describes a ~~slip or a fall.~~

~~1.2 Also, this guide may be useful in the selection of footwear~~ method for ~~certain surfaces where~~ ranking slip resistance ~~is~~ test results of ~~specific interest.~~

~~1.3~~ footwear bottom materials on contaminated 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:*~~

~~F 802 Guide~~Summary

2.1 Slip resistance test results of two or more footwear bottom materials are compared on a walkway surface after adding contaminants likely to be found on the walkway. For each contaminant, the footwear bottom material with the highest test result is ranked 1, the footwear bottom material with the next highest test result is ranked 2, and so forth. The rankings for ~~S~~ each footwear bottom material are totaled.

2.2 The footwear bottom material with the lowest total ranking number can be regarded as the most slip-resistant under the conditions of ~~Certain Walkway Surfaces When Considering Footwear Traction~~[2] the test.

3. ~~Summary of Guide~~

~~3.1 Foreign materials on a walkway surface often cause slip and fall accidents. Although the foreign material should be removed, it is not always easy to remove the material continuously in a work environment where the very work operation is the cause of the presence of foreign material being on the walkway surface. In some cases, footwear bottoms are made of materials that are superior to others for purposes of slip resistance when specific foreign substances interface between the shoe bottom and the walkway surface.~~

~~3.2 This guide sets forth a format for categorizing the relative degree of slip resistance that can be expected when footwear with certain bottom materials is interfaced with a walkway surface by specific foreign materials.~~

~~4.~~ Significance and Use

~~4~~3.1 This guide ~~is intended to assist footwear manufacturers in the selection of work footwear with specific bottoms~~ provides a method for ~~certain work environments~~ comparing footwear bottom materials based on their slip characteristics on contaminated surfaces.

3.2 In places where the presence of ~~specific foreign materials often cause slip and fall accidents. The guide~~ contamination is ~~also intended to assist employers or employees~~ expected and ~~others~~ in ~~selecting work footwear appropriate for their work environment.~~

~~4.2 When the conditions are such that foreign materials can come between shoe bottoms and a walkway surface in a work~~

environment, when constant cleaning places where it is unfeasible, and when the not feasible to keep walkway surface mas conterinually clean and d dry, it may be modified appropriate to control the danger of a slip or a fall, efforts should be made to identify and use suggest footwear bottom materials with better slip resistant qualities that will reduce the hazard potential in this environment.

4.3 This type of slip hazard is often found in manufacturing and maintenance processes and service industries where foreign materials are frequently present on walkway surfaces. resistance test results (that is, a lower total ranking number). Examples could include food preparation and processing areas, rendering operations, transportation, places where machine oil is used, and cargo handling activities.

5. areas.

3.3 This guide may be useful to safety professionals, union officials, and company management.

4. Procedure

5.1 The presence

4.1 Select two or more pieces of foreign materials on walkway surfaces often causes people to slip. Most foreign materials, if present on a walkway, will lower footwear bottom material for slip resistance for most footwear. A foreign material in contact with a testing. If testing the whole shoe and bottom is not feasible, select a walkway presents two additional surfaces; piece from the top back of the foreign material mating with the heel bottom or from the center of the ball of the shoe bottom. Consideration should be, given to both tread design and the bottom soling material. Footwear or soling suppliers, or both, can be a source of foreign material mating information for assisting with selection of appropriate bottom materials.

4.2 Select an appropriate method for slip resistance testing. Test methods under the jurisdiction of ASTM Committee F13 would be appropriate.

4.3 Select a walkway surface. The ideal approach to reduce slipping surface and contaminants based on walkways is to eliminate the two additional surfaces caused by the presence expected normal environmental exposure of the foreign material.

NOTE 1—Guide F 802 discusses footwear.

4.4 Place an appropriate contaminant on the walkway surface and on the footwear bottom material. Describe the contaminant and the method for applyimming it, the walkway surface, and the test procedure in sufficient detail so others can reproduce the test procedure.

4.5 Test slip resistance of foreign substances the bottom material on the walkway surfaces.

5.2 Along surface in accordance with a program to eliminate foreign substances from the appropriate test method instructions.

4.6 Select another bottom material and place contaminant on it. Replenish the contaminant on the walkway surface. Continue as in 4.5.

4.7 Continue testing in this way until all the bottom materials have been tested.

4.8 Assign a working environment, it may be necessary rank of 1 to have workers wear footwear with specific the bottom material that has slip resistant qualities that reduce the chances of slipping highest test result, 2 to the material with a particular foreign substance present the next highest test result, and so on until all the walkway surface. Work footwear suppliers can be a source materials have been ranked. When two or more slip resistance test results are equal, give each one the average of information the rank values they otherwise would have had. For instance, if there is a tie for assisting with selection second and third, give each a value of appropriate bottom material that 2.5. If there is effective with specific work environments.

5.3 A format a tie for categorizing slip resistant qualities second, third, and fourth, give each a value of footwear 3.

4.9 Clean the walkway surface and bottom materials on typical foreign substances found on completely to prevent cross contamination, without damaging the bottom materials or walkway surface.

4.10 If desired, select another contaminant and continue as in 4.4-4.9 until all contaminants have been tested.

4.11 Tabulate the work place is shown rank numbers using columns for contaminant and rows for footwear bottom material (see example in Fig. Table 1.

5.3.1 The slip resistance testing machine, or method used, qualifies.)

4.12 Add the categorization presented.

5.3.2 The type of floor surface or surfaces can affect results of slip resistant determinations with the presence of certain foreign substances.

TABLE 1 Example: Ranking Footwear Bottom Materials Versus Contaminants

	Contaminant A	Contaminant B	Contaminant C	Total
Bottom material A	1	2	1	4
Bottom material B	3	1	2	6
Bottom material C	2	4	3	9
Bottom material D	4	3	4	11

5.3.3 Some typical entries rankings for substance on floor surface are: water, oil, food waste, ink, animal fat, vegetable oil, detergent, and nothing.

5.3.4 Footwear each bottom material or shoe identification material. The lowest total rank value is interchangeable depending on how assumed to be the categorization is used with most slip-resistant under the promotion or selection conditions of work footwear.

5.3.5 Classification of the r test. A high total rank value does not necessarily indicate poor slip resistance, Very Good, Good, Fair, and Poor, is in but may indicate that other materials perform better under the context particular conditions of the substances involved test.

4.13 Perform all measurements in the same day, with the slip resistant determination, the footwear, the floor surface, same operator, and the foreign material. For example, a slip resistant value that results in ranking a footwear same test equipment.

5. Keywords

5.1 coefficient of friction; footwear; shoe bottom material as appropriate for use in a specific work environment could result in a lower ranking for a different work environment. material; shoe heel; shoe soling; slip resistance