9.2 Field Test

9.2.1 Determine the area(s) to be tested based on the test objective. An area is a contiguous space with hard surface flooring of the same or similar type.

9.2.2 Determine test locations required per area based on the test objective.

INFORMATIVE NOTE: *The following are typical locations that should be considered for testing: Locations that are representative of both high and low traffic conditions, locations that evaluate varying material sizes or textures, and locations commonly exposed to contaminants or other risks.*

INFORMATIVE NOTE: *If testing on a sloped surface is required, confirm that the slope of the test location(s)* is *within the constraints of the testing device as recommended by the testing device manufacturer.*

9.2.3 For each test location, choose a minimum of three test samples of size sufficient to accommodate the test travel distance (see Section 9.1.4).

9.2.4 Determine if the test will be conducted under clean conditions or under prevailing conditions (without pre-cleaning the surface before testing).

INFORMATIVE NOTE: *If the test objective is to measure a contaminant-free floor, clean the surface prior to testing. If the test objective is to measure the floor under prevailing conditions, test the floor "as is" without cleaning.*

9.2.5 When testing the prevailing conditions, the test shall be conducted in the "as-is" condition. Remove any obvious solid contaminants (e.g., dirt, crumbs, coffee grounds, etc.) from the surface prior to testing. Take note of any solid contaminants which are removed from the surface.

9.2.6 When results are required under clean conditions, use cleaning chemicals as listed in Sections 6.3 and 6.5, and a soft bristle brush or light duty scrubbing pad, as needed to remove surface contaminants. Additional scrubbing using a stiff bristle brush may also be required to reach a clean condition as long as such does not damage the flooring material. Rinse thoroughly to remove residual cleaning chemicals.

9.2.6.1 Remove rinse water with a dry mircofiber cloth or paper towels that do not leave a residue. Inspect microfiber cloth or paper towels. If any contaminants are visible from the rinse water, conduct another cleaning cycle. Repeat until the mircofiber cloth or paper towels appear clean after removing the rinse water.

NFORMATIVE NOTE: *Use of cleaning chemicals on hard surface flooring materials, including but not limited to, acidic cleaners, citrus degreasers, solvents, sealer strippers, or other cleaners, can potentially change the DCOF of the flooring surface. Caution should be exercised when using such cleaners. Caution should also be exercised when cleaning with a stiff bristle brush, as the use of such can potentially alter the surface of test specimens.*

9.2.7 Wet the path that the testfoot will follow with enough 0.05% SLS water such that the testfoot will remain within the wetted path throughout the entire test.

9.2.8 Take a total of four dynamic measurements at each test sample being measured. Take one measurement then rotate the testing device 180° and take the second measurement. Remove the SLS solution from the surface with a microfiber cloth or paper towels that do not leave a residue. Rewet the surface in a path 90° to the previous one. Take the final two measurements, along the new path, in the same fashion as above.

9.2.9 Repeat Sections 7.2-7.4 before each test sample.

9.2.10 Record all four dynamic measurements then calculate an average for each test sample.

INFORMATIVE NOTE: *DCOF measurements taken across grout joints and protruding features of three-dimensionally patterned or profiled walkways can produce misleading measured DCOF values due to test device constraints. Additionally, for surfaces where direction of testing may influence DCOF results (mosaics, three-dimensionally patterned or profiled surfaces, etc.), consider additional measurements in varying orientations relative to the test specimen surface to evaluate potential variation in DCOF results based on test direction.*

10.0 Dry Dynamic Coefficient of Friction (DCOF)—If Desired

10.1 Repeat Sections 7.0-9.0, except recondition the testfoot and run the test and validation procedure in the dry condition. All specimens/test areas must be completely dry before conducting the test. For validation procedure, use a range of ± 0.04 of the value stated *for dry DCOF testing* on the ANSI A326.3 validation surface.

11.0 Report

11.1 Report the following information:

11.1.1 Type of surface, including unique identifying name or number.

11.1.2 Temperature during testing and relative humidity if testing in the dry condition.

11.1.3 Testing device used and calibration due date of testing device.

11.1.4 Testfoot material.

11.1.5 Cleaning chemicals used.

11.1.6 SLS water concentration (wet DCOF testing only).

11.1.7 Statement of validation procedure including actual dynamic coefficient of friction values measured on the ANSI A326.3 validation surface before and after testing and whether or not each fell within the appropriate range.

11.1.8 Individual and average wet dynamic coefficient of friction for specimen/test area.

11.1.9 Individual and average dry dynamic coefficient of friction for each specimen/test area (if desired).

11.2 Additional reporting for field testing:

11.2.1 Note if the measurements were made in areas that had been cleaned or in a prevailing (“as-is”) condition.

11.2.2 Description/photographs of test areas sufficient to re-locate the test areas.

11.2.3 Note general environmental conditions, such as (but not limited to): contaminant type present, coatings or sealers present, traffic conditions, maintenance equipment, and presence of walk off mats.

12.0 Discussion of Wet DCOF Method Precision

12.1 **Precision:** The precision of Section 9.0 of this test method is based on an interlaboratory study

conducted in May 2011. Each of six laboratories tested seven different materials. Every "test result" was calculated using the average of four individual wet dynamic coefficient of friction measurements. The laboratories obtained three replicate test results for each material.

12.1.1 **Repeatability:** Two test results obtained within one laboratory shall be judged not equivalent if they differ by more than the "r" value for that material; "r" is the interval representing the critical difference between two test results for the same material, obtained by the same operator using the same equipment on the same day.

12.1.1.1 "Sr" represents the repeatability standard deviation.

12.1.2 **Reproducibility:** Two test results shall be judged not equivalent if they differ by more than the "R" value for that material; "R" is the interval representing the difference between two test results for the same material, obtained by different operators using different equipment.

12.1.2.1 "SR" represents the reproducibility standard deviation.

12.1.3 Any judgment in accordance with these two statements would have an approximate 95% probability of being correct.

12.2 The precision statement was determined through statistical examination of 126 results, from six laboratories, representing six different BOT 3000 devices, on seven materials. Descriptions of the seven surfaces tested are as follows:

Surface 1: Polished porcelain
Surface 2: Glazed porcelain, lightly textured
Surface 3: Glazed porcelain, heavily textured
Surface 4: Standard tile, glazed ceramic, smooth
Surface 5: Unglazed mosaics
Surface 6: Unglazed porcelain, textured
Surface 7: Glazed porcelain, smooth

Table 2: Dynamic Coefficient of Friction with 0.05% SLS Water

Surface	Average (x)	Standard Deviation (Sx)	Repeatability Standard Deviation (Sr)	Reproducibility Standard Deviation (SR)	Repeatability (r)	Reproducibility (R)
1	0.36	0.02	0.02	0.02	0.05	0.05
2	0.44	0.02	0.01	0.02	0.03	0.05
3	0.43	0.02	0.02	0.02	0.06	0.06
4	0.27	0.01	0.01	0.01	0.03	0.03
5	0.63	0.02	0.01	0.03	0.04	0.07
6	0.65	0.03	0.01	0.03	0.03	0.08
7	0.24	0.01	0.01	0.01	0.02	0.02

ANSI A326.3 | FIGURES

Figure 1: SBR sensor with wear line.

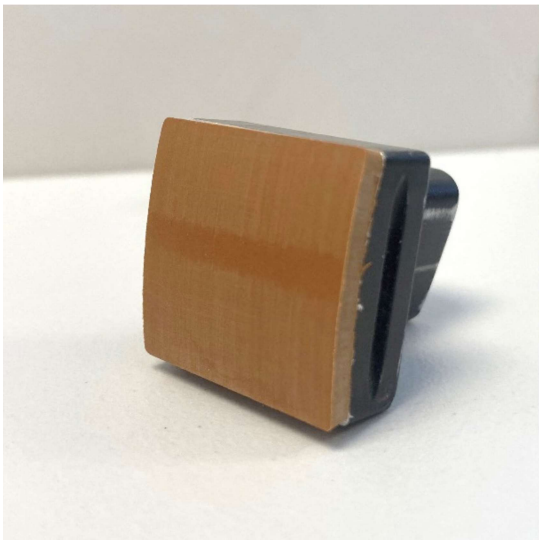

Figure 2: SBR sensor without wear line.

END OF ANSI A326.3

THIS STANDARD IS UNDER CONTINUOUS MAINTENANCE AND ALWAYS OPEN FOR COMMENT AND PROPOSED REVISIONS. PLEASE SUBMIT COMMENTS AND PROPOSED REVISIONS TO THE COMMITTEE SECRETARY, KATELYN SIMPSON, KSIMPSON@TCNATILE.COM.

Appendix A (Informative)

This appendix is informative and is not part of ANSI A326.3.

A1. Testfoot Reconditioning Procedure for the BOT 3000E Testing Device

1. Insert a strip of new sandpaper into the testfoot reconditioning tool.
2. Using a paint brush or chip brush, brush out loose particulate from the new sandpaper strip.
3. Insert SBR testfoot into the testfoot reconditioning tool using the correct orientation.
4. Rotate the SBR testfoot in either direction until no debris or wear lines are visible on the testfoot surface.
5. Remove the SBR testfoot and thoroughly brush its surface to remove any loose material.
6. Brush out loose particulate from the sandpaper surface.
7. Re-insert the SBR testfoot into the testfoot reconditioning tool and rotate for 10 revolutions.
8. Remove the SBR testfoot and thoroughly brush its surface to remove any loose material.
9. Wipe the surface of the SBR testfoot with a clean microfiber cloth or paper towel that does not leave residue to ensure the removal of any loose material and/or contaminants.

For a video demonstration of the procedure listed above, please refer to the section titled "Sensor Reconditioning Procedure" (beginning at time 0:16 and ending at time 1:51) in the following educational video: https://youtu.be/_SV5mhrEwzQ?t=16.

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