

## **NFSI Validation Reference Check Surfaces (RCS) Instructions**

The purpose for the RCS's is to either calibrate or validate the wet DCOF of a specific tribometer and its companion test foot to the NFSI B101.3 or ANSI A326.3 wet DCOF standard. A copy of the B101.3 standard is available for purchase from the NFSI at: [www.nfsi.org/standards](http://www.nfsi.org/standards).

The NFSI RCS's are comprised of two materials, the first being an engineered checkerboard patterned glass (RCS1) surface and the second being a lightly textured molded white PTFE type substrate (RCS2). Each surface measures 12" X 12" in size and possess a highly uniform DCOF range. NFSI research has demonstrated that each RCS material demonstrates a high level of repeatability and reproducibility. A copy of the research entitled "Identification of Appropriate Tribometer Validation Surfaces" is available from the NFSI at: [nfsi.org/research](http://nfsi.org/research).

Each surface has been tested per the NFSI B101.3 wet DCOF standard and has the following wet DCOF values.

RCS1 - 0.74 +/- 0.04

RCS2 - 0.16 +/- 0.03

### **How To Use The RCS's For Tribometer Calibration:**

To calibrate a specific tribometer and companion test foot follow the manufacturer's instructions for use and test foot preparation procedure.

Note: The NFSI B101.3 standard requires the use of 2000 grit sandpaper to prepare the test foot. Using a more aggressive sandpaper may significantly increase the wet DCOF values.

Step 1. Clean the RCS using distilled water and dry using a lint-free cloth

Step 2. Place the appropriate amount of diluted SLS solution of 0.1% for use with B101.3 or 0.05% for use with A326.3 at the center of the RCS.

Note: use of 0.05% SLS as prescribed by the A326.3 standard may produce higher DCOF readings than that of 0.1% SLS as prescribed by the NFSI B101.3 standard. For more information on the use of the RCS's with the A326.3 standard please consult the Tile Council of North America (TCNA).

Step 3. Place your tribometer on the wetted surface and record a measurement.

Step 4. Rotate the RCS 90 degrees and repeat until readings are taken in all four directions.

Step 5. Record each reading and average. The average wet DCOF value should be within the designated wet DCOF level for either RCS.

Step 6. Prepare the test foot.

Step 7. Repeat steps 3-5 for use with the other RCS.

If the tribometer and companion test foot combination's wet DCOF values are within the published wet DCOF ranges of each RCS, the device is considered calibrated.

### **For Tribometer Validation**

The purpose of validation is to assure that the tribometer and its companion test foot are functioning within their designated parameters and to confirm that the tribometer is functioning properly and the test foot has been properly prepared. Only one RCS is required for validation purposes.

To validate a specific tribometer and companion test foot follow the manufacturer's instructions for use and test foot preparation procedure.

Note: The NFSI B101.3 standard requires the use of 2000 grit sandpaper to prepare the test foot. Using a more aggressive sandpaper may significantly increase the wet DCOF values.

Step 1. Clean the RCS using distilled water and dry using a lint-free cloth

Step 2. Place the appropriate amount of diluted SLS solution of 0.1% for use with B101.3 or 0.05% for use with A326.3 at the center of the RCS.

Note: use of 0.05% SLS as prescribed by the A326.3 standard may produce higher DCOF readings than that of 0.1% SLS as prescribed by the NFSI B101.3 standard. For more information on the use of the RCS's with the A326.3 standard please consult the Tile Council of North America (TCNA).

Step 3. Place your tribometer and companion test foot on the wetted surface and record a measurement.

Step 4. Rotate the RCS 90 degrees and repeat until readings are taken in all four directions.

Step 5. Record each reading and average. The average wet DCOF value should be within the designated wet DCOF level for either RCS.

If the tribometer and companion test foot wet DCOF values are within the published wet DCOF ranges of either or both of the RCS's, the device and companion test foot are considered validated.