Letter of Interpretation: ANSI/NFSI B101.1-2009

Effective August, 31, 2010 replaces previous version dated November 30, 2009

Q: What does it mean when the standard says the tribometer must be "approved" or "recognized"? By whom must the tribometer be "approved"? What is the difference between "approved" and "recognized"?

A: An approved tribometer is one that is in compliance with the criteria set forth by the National Floor Safety Institute's (NFSI) Tribometer Selection Process (TSP). For information on the NFSI's TSP please visit: www.nfsi.org

A recognized tribometer is one that, while not approved by the NFSI, is capable of measuring wet static coefficient of friction (SCOF) within the ranges listed in Table 1 of the ANSI/NFSI B101.1-2009 standard, and used with a reference calibration tile. The reference calibration tile must be measured before the surface of interest according to the procedure below and a calibration factor determined to calibrate tribometer readings to a known reference value.

The reference calibration tile, available from NFSI or Tile Council of North America, has a known value of 0.50 (NFSI calibration tile) or 0.52 (TCNA calibration tile), and the resulting calibration factor must be no more than ±0.05. The calibration procedure is as follows:

1. Follow tribometer manufacturer's instructions for reconditioning the sensor.

2. Clean the calibration tile surface with de-ionized or distilled water. Wipe dry with a lint free cloth or untreated paper towel.

3. Saturate the calibration tile with de-ionized or distilled water.

4. Make a total of four static measurements, each perpendicular to the previous measurement.

5. Calculate the calibration factor as follows: $X_W = 0.50 - C_W$ (when using the NFSI calibration tile) or $X_W = 0.52 - C_W$ (when using the TCNA calibration tile) where X_W = calibration factor and C_W = average of the four measurements recorded.

6. Once measurements of the surface of interest are made use the following equation to calculate wet static coefficient of friction: $F_W = T_W + X_W$ where: F_W = static coefficient of friction, T_W = average of measurements recorded for the test sample, and X_W = calibration factor

NOTE: Only those devices that are capable of measuring wet SCOF within the ranges listed in Table 1 and within the specified reference calibration tolerance shall be recognized for use under this standard.