

Slip-Resistant Circulation Path: Hard Surface Flooring

IBC: 1003.4, 1003.4.1 (New)

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2018 International Building Code

1003.4 Slip-resistant surface. Circulation paths of the *means of egress* shall have a slip-resistant surface and be securely attached.

1003.4.1 Hard surface flooring. Hard surface flooring shall be slip-resistant, per ANSI A326.3.

Reason:

Currently, Section 1003.4 requires that circulation path surfaces of the means of egress be “slip-resistant” with no method of measurement, quantitative threshold, or general principles to help the specifier, end-user and code official. Given the Code’s lack of criteria for “slip-resistant,” materials are sometimes being inappropriately specified, and accidents occur in areas of the means of egress. This can be especially dangerous for emergency responders who are entering a building for the first time, potentially under conditions with water and limited visibility (smoke).

The purpose of this revision is to provide slip resistance criteria for hard surface flooring used in interior circulation paths. The proposed reference standard, ANSI A326.3, sets forth a quantitative minimum threshold, means of measurement, and general principles regarding slip resistance for hard surface flooring and is widely specified for ceramic tile, polished concrete, terrazzo, and natural stone. This would provide clarity, safety, and transparency with no increased cost of construction.

This proposal is being submitted by Tile Council of North America (TCNA), Natural Stone Institute, American Society of Concrete Contractors (ASCC), Concrete Polishing Council (CPC), and National Terrazzo and Mosaic Association (NTMA), with the support of many other organizations.

Previously, slip resistance for ceramic tile was standardized solely by ANSI A137.1 American National Standard Specifications for Ceramic Tile. In 2012, a proposal (S222-12) was approved which removed ANSI A137.1 from Section 2103 of the Code (previously, Section 2103.6) in an effort to consolidate masonry-based specification references. An unintended consequence of this change was that the Code was subsequently left with no slip resistance criteria for ceramic tile, much less stone, terrazzo, or concrete.

In 2015, a proposal (E3-15) was made to reintroduce the slip resistance provisions of ANSI A137.1 into the Code. Given that these provisions were being widely adopted and specified for flooring types beyond just ceramic tile, the scope of the proposal included

other hard surface flooring types with the support of each respective industry. The proposal was met with positive feedback from the Means of Egress Committee, but was ultimately disapproved since the proposed reference standard was limited to ceramic tile. At the time, the Committee encouraged the proponents to collaborate on a stand-alone slip resistance specification which covered all hard surface flooring types and return in 2018 with a proposal.

Today, this work has been done for all hard surface flooring and is standardized in ANSI A326.3, including in the standard test sample size and testing in as-is conditions or under cleaned conditions. This standard is widely understood for hard surface flooring and specified throughout the architectural community with hard surface manufacturers/suppliers/installers regularly providing the information needed by code officials as part of standard product submittals and information. Revising Section 1003.4 to reference ANSI A326.3 for hard surface flooring would clear-up ambiguity around the requirement for “slip-resistant” circulation path surfaces, facilitate increased safety and ease-of-specification, and codify the slip resistance standard which is most predominately used today for hard surface flooring.

ANSI ASC A108, the committee which developed ANSI A326.3, represents a broad range of stakeholders, including the Construction Specifications Institute (CSI), Natural Stone Institute, National Association of Homebuilders (NAHB), Underwriter Laboratories (UL), National Tile Contractors Association (NTCA), Tile Council of North America (TCNA), and 58 additional stakeholders (for a total of 64).

A copy of ANSI A326.3 has been attached to this proposal and is also easily accessible for free online via www.TCNAtile.com.

Bibliography:

[TCNA Tile Initiative] [Research Supporting an American National Standard for Slip Resistance] [Eric Astrachan] [2016] [Pages 2 - 9] [http://www.tcnatile.com/images/pdfs/Rsch_suptng_ANSI_std_slip_resist_TCNA_TI_Mar-2016.pdf]

[Slip and Fall Study Report: Enhancing Floor Safety Through Slip Resistance Testing, Maintenance Protocols and Risk Awareness] [CNA Financial Corporation] [2017] [http://www.tcnatile.com/images/pdfs/CNA_Risk_Control_Slip_and_Fall_Report_Final.pdf]

Cost Impact

The code change proposal will not increase or decrease the cost of construction.

Hard surface flooring that meets or exceeds the criteria of the ANSI A326.3 standard is not different in price from hard surface flooring that is below the threshold criteria.