

## Resilient Answer Man: Speaking the Same Language

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We heard a lot of positive feedback from readers after my column on terminology ("Don't Call It Linoleum If It's Sheet Vinyl," NFT January 2005). Of course there were some people who suggested that I need to get a life. "Who cares if you call sheet vinyl linoleum or call an underlayment a subfloor?" "Does anybody really use the term 'substrate'?" My feeling is that if we have industry standard definitions like those in ASTM F 141, Standard Terminology Relating to Resilient Floor Coverings, then we should use them and educate our customers and colleagues likewise. This way we all speak the same language and we're not confusing our customers.



*As resilient products keep getting better and the lines between categories are blurred, there is a growing need for clarity in the terms we use. Pictured here is a selection from Mannington's new Sobella glassback line. The realism of the 12 patterns in this line is the result of the company's exclusive NatureForm Optix technology.*

I want to expand on that, and I want to be a bit more serious because we will address a number of standards and terms that are frequently misquoted or misused in the industry. It gets a little technical, but it is important to clear this up because architects often ask questions about resilient flooring products based on manufacturers' published specifications and/or product claims as published in their literature. Here are three examples:

"How high is the PSI?"

You will often see manufacturers brag about the "High PSI" their floors will withstand, referring to the ASTM F 970 Standard Test Method for Static Load Limit. The test is designed to simulate the weight of furniture on a floor. It is conducted by placing a designated weight on a one square inch section of flooring material for 24 hours, taking the weight off, waiting 24 hours for the material to recover and then measuring the indentation. Many manufacturers have run the test at very high weights, or have run a "modified" test in order to publish the highest PSI (pounds per square inch) possible.

The problem with this practice is that the test itself has never been proven to be repeatable at weights above 250 lbs. That means any results over that are considered "modified" and may not be accurate.

Second, the test is strictly for the flooring product, and does not take the adhesive or the substrate into account. So even if a flooring material has a "high psi" the adhesive may still be susceptible to indentation.

Third, the test is conducted for one 24-hour period only, so recovery from long-term

indentation, such as from a piece of furniture, is not represented by the test results.

Finally, the "pass/fail" for most resilient flooring products is 0.005". That may not seem like much, but it still means there is visible indentation on most flooring. Even if the product passes, the indentation is usually visible, especially on a smooth surface material and/or a high-gloss floor.

In theory, if a manufacturer publishes "2500 psi," that means the floor will withstand a 10,000 lb. piece of equipment on four legs. In reality, that is unrealistic. Common sense tells us that heavy furniture should rest on wide feet to dissipate the weight load as much as possible and reduce the risk of permanent indentation. Even then, it would not be wise to promise that any floor covering product will withstand the weight of heavy furniture, fixtures or equipment. The Resilient Floor Covering Institute ([www.rfci.com](http://www.rfci.com)) has published a report titled "Static Load Limit Testing of Resilient Flooring Products." It is recommended reading for everyone involved in the specification of Resilient Flooring, and makes a strong statement about the proper use of this testing.

"Does it meet ADA?"

It is commonly assumed that the Americans with Disabilities Act (ADA) has legal requirements for Static Coefficient of Friction (SCOF). Floor covering manufacturers regularly publish claims about flooring products that say things like "Meets ADA Requirements" when in fact the Americans with Disabilities Act Accessibility Guidelines (ADAAG) (which is the full name of the section in question, by the way) has no such requirements and never did. The United States Access Board, described as "A Federal agency committed to accessible design" issued Bulletin #4: Ground and Floor Surfaces" in August 2003 ([www.access-board.gov](http://www.access-board.gov)). There is a lot of information, including questions and answers that clear up the confusion on this issue. Here are some excerpts:

Researchers' recommendations for a static coefficient of friction for surfaces along an accessible route...were approximately 0.6 for a level surface and 0.8 for ramps. These values are included in the advisory material in the Appendix to ADAAG, but are not in any way mandatory.

What surface characteristics are required of an accessible route? The ADAAG requires only that newly constructed or altered ground and floor surfaces of accessible routes on sites and in buildings and facilities be stable, firm, and slip-resistant. No standards or methods of measurement are specified in scoping or technical provisions, although the Appendix to ADAAG contains advisory recommendations for slip resistance values derived from Board-sponsored research. Because the sample size was small, the testing method unique, and the findings not yet corroborated by other research, the suggested values have not been included in the body of ADAAG and should not be construed as part of the regulatory requirements for entities covered by titles II and III of the ADA.

Is there a specific coefficient of friction required for a surface to be "slip resistant"?

No. There are a variety of ways to measure the coefficient of friction for different materials and no single test device or procedure has been identified. A Board sponsored research project, described in the ADAAG Appendix Section A4.5.1, suggested some values but, without a defined test procedure, these recommendations cannot be applied.

The bottom line is that there are no "ADA Requirements." Once again, common sense should prevail when specifying floor coverings. If an area is inclined or will be frequently wet, go with flooring products that are specifically designed to be less slippery, or apply a coating designed to make the surface less slippery. Just as important, keeping a floor dry and clean is a key factor in maintaining a safe walking surface, regardless of what type of floor covering is installed, as Bulletin #4 explains, Moisture and debris contamination adversely affect the surface slip resistance of most installed finishes.

I hope that ASTM standards currently in development will clarify this issue for specific flooring types such as resilient flooring so that there will be a uniform methodology for testing.

#### "What Is Luxury Vinyl Tile (LVT)?"

The term "Luxury Vinyl Tile" is used so much that some people actually think this is a category of flooring material. However, if you go by industry standards per ASTM, there are only two Vinyl Tile categories: Vinyl Composition Floor Tile (VCT) and Solid Vinyl Floor Tile (SVT). This difference between the two lies in the vinyl content, also known as "binder content." ASTM F 1700, Standard Specification for Solid Vinyl Floor Tile explains, "The binder consists of polymers and/or copolymers of vinyl chloride, other modifying resins and plasticizers which comprise at 34% by weight of the finished tile." The lower vinyl content products that do not meet the 34% requirement are classified as ASTM F 1066 Vinyl Composition Floor Tile.

ASTM F 1700 classifies SVT in three categories – Class I Monolithic, which means through color tile with no backing; Class II Surface Decorated, which usually means an "inlaid" type tile with a backing; and Class III, Printed Film Vinyl Tile, which has a photographic print film over a backing with a clear vinyl wear layer on top. Class III is the most popular category, including wood look vinyl plank, as well as stone, marble and granite looks. A minimum wear layer thickness of 0.020" (20 mils) will classify the product as "Commercial," and anything under that, even though it is SVT, is residential.

Class III products are often called "Luxury Vinyl Tile" or "LVT." It is important to note that many products sold as "Luxury Vinyl" such as many residential grade tile products are not SVT. These products have a highly filled backing that does not meet the 34% requirement, so these products are actually VCT.

A manufacturer's rep I know recently told me "I'm on board with playing by the rules but we work in an industry that doesn't. Why should we (his company) be the leader in playing fair when nobody else does?" That statement cut me to the core and was the inspiration for this column. Our industry has a long way to go to speak the same language and describe flooring products accurately and truthfully. Hopefully as these standards become more commonly known, we will get there.

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