

## Where the Rubber Meets the Road: Moisture Testing When Installing Rubber or Vinyl Floors



Outline:

- The Different Characteristics of Rubber and Vinyl Flooring
- How can Moisture Cause Problems with Rubber and/or Vinyl Flooring?
- Moisture Testing Prior to Installing Rubber and/or Vinyl Flooring

### The Different Characteristics of Rubber and Vinyl Flooring

Vinyl and rubber floor products have a myriad of advantages including excellent water resistance, easy maintenance, and a natural scratch resistance. They are typically durable and long lasting and come in a variety of applications to suit almost any location. The other advantage to vinyl floor products is that they are available in a wide range of looks and styles to compliment any décor.

Vinyl flooring has increased well beyond the standard sheeting in the range of floor products available. Vinyl tile, in both commercial and standard grades, and vinyl planking are options with either locking or standard glue-down installation. Some vinyl floor products include limestone or fiber additives or backings that increase their durability and chip resistance, or offer more cushioning underfoot. A good example is flex flooring, a product made to go over existing vinyl flooring. The combination of polyurethane top layer and fiber backing give it better flexibility for both installation and for comfort.

Rubber flooring provides a slip-resistant surface that holds up very well under heavy foot traffic. It can be purchased with a number of designs, colors and patterns for an easily customized look suited to either home or industrial use. Textures like round stud or diamond grip increase the traction level of foot traffic while still having an industrial-standard resistance to wear and damage. Rubber flooring is available in either tiles or sheets and can be applied with glue, for a movement-free flooring, or as "loose lay," attached with double-sided tape for quick removal if required. Rubber tiles are also available in interlocking styles for adhesive free applications over a variety of surfaces.

Because both vinyl and rubber floorings are natural impervious to water, it would seem that moisture testing for rubber or vinyl flooring applications might be unnecessary. But the cost of moisture-related problems can be just as high even with these seemingly "moisture proof" floors.

### How can Moisture Cause with Rubber and/or Vinyl Flooring?

The real problem for vinyl and rubber flooring is often in the subfloor, or in giving moisture access to the subfloor. Moisture can impact the flooring in two locations:

#### 1. Seams (if there are any)

Tiles and planking in either vinyl or rubber styles will naturally contain more seams in a finished floor. In a loose-lay or floating installation, those seams provide spaces for moisture to seep down through the seams and either enter the subfloor or sit between the subfloor and the flooring affecting both the product, the subfloor and the adhesive used to connect the two. In a fiber-backed product, it is easy to see how this can also cause warping, buckling, swelling or even lead to mildew.

#### 2. The subfloor itself

Because rubber and vinyl products are so well suited to damp or humid conditions, they are often applied directly (or indirectly) over concrete or other subfloors. But if that subfloor is not dry to acceptable levels, the reality is that product and/or adhesive is at risk of a flooring failure.

### Moisture prior to installing rubber and/or vinyl flooring

Moisture, particularly in a concrete slab, can come from a number of sources. If the slab does not have an adequate moisture barrier underneath, moisture can wick up from ground sources in a continuous cycle. And any existing slab can still be subject to moisture intrusion if it is in contact with leaking plumbing or irrigation systems, ground moisture or excess humidity in the environment.

In a new slab, if the concrete has not dried internally to the levels acceptable for the particular flooring and/or adhesive used, moisture will continue to work its way to the surface under the applied flooring. (Explanation of the process of [moisture movement in a drying concrete slab](#))

For any flooring installation, adequate moisture testing is imperative. For a concrete subfloor, relative humidity (RH) testing is the best way to get a true picture of the moisture conditions within the slab to prevent any negative moisture impact to the finished floor. The [ASTM F2170](#) recommends in situ probes for RH testing. Test methods like the [Rapid RH® 4.0](#) provide fast and accurate test results within the subfloor so that any issues can be remediated before putting the flooring at risk.

When installing a rubber or vinyl floor, moisture testing is just as, or even more, important than it is with any other flooring product. Because where the rubber meets the road, moisture can still jeopardize your installation.