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FCICA News: FCICA's Quick Guide to Concrete Moisture Testing

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A common question that comes in to our FCICA "TechNet" help center is, "What method should I use to test for moisture?" Here are four of the most common methods.

1. The plastic sheet test was a very common test for a long time, but is now out of date. It's been proven scientifically that if you tape a sheet of plastic to the floor overnight to test for moisture, a dry result can occur on slabs that are still actually wet.

2. Electronic meters designed to test concrete (not wood) are a "spot" test for surface moisture at that spot in the slab at that point in time, but don't predict long term moisture problems. They are useful for testing gypsum-based underlayments, trouble shooting flooring failures, or to identify locations in a concrete slab that need further testing. Just remember that the industry does not recognize moisture meter testing on concrete as a way to decide "go or no go" for a flooring installation.

3. The Calcium Chloride test, ASTM F 1869, measures the moisture vapor emission rate (MVER) from the top 3/4-inch of the concrete in pounds of water vapor per one thousand square feet per 24 hours, or just "pounds". Flooring manufacturers recommend a maximum MVER of 3 or 5 pounds, depending on the product.

4. The Relative Humidity Test, ASTM F 2170, measures moisture inside the slab that might come to the surface in the future. Usually a reading of 75-80 percent is acceptable. This is truly the latest technology for moisture testing and is very quickly being recognized by flooring manufacturers throughout the world.

Many people use a combination of these last three test methods to determine if the concrete is ready for a floor covering installation. For more information, go to the FCI or National Floor Trends websites, fcimag.com or ntlfloortrends.com, and read several recent articles that give you the latest information about the most up-to-date test methods. You can also contact ASTM, astm.org to get a copy of the actual test methods for Relative Humidity and Calcium Chloride testing, or drop us a line, info@fcica.com and we can point you in the right direction if you need help.

Moisture is a common concern and is best addressed before rather than after you've performed installation.

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