Determining Moisture Content in a Concrete Slab

A DIY method to help identify potential moisture concerns is the plastic sheet method.

1. Tape down an 18” x 18” 4mil polyethylene sheet to the concrete surface with 2” wide duct tape, making sure the edges are fully sealed.
2. Let it sit for at least 16 hours—longer if possible.
3. Once the time’s up, check under the sheet for any signs of moisture, both on the underside of the sheet and on the concrete surface itself.
   (Recommended to test every 500 sq. ft. of flooring surface)

If moisture is found under the poly-film or on the concrete, it is recommended NOT to proceed with the installation of flooring. Installing flooring over a moisture-compromised surface can lead to issues like, mold growth, structure damage or damage to the flooring itself.

Before taking any corrective action, it's important to get more accurate measurements of the moisture levels using the following tests.

These tests will give a clearer idea of how much moisture is present and help in deciding the best solution.

- ASTM F2170 (relative humidity meter test) or
- ASTM F1869 (vapor emissions test).
- Calcium Chloride moisture test kits
- Concrete moisture meters

Some corrective actions would be sealers, or epoxy coatings specifically designed to control moisture vapor emissions in concrete. These products can be applied to prevent moisture from affecting the flooring installation. (ARDEX, SCHONOX, BONA).

In some cases, lowering the moisture levels by improving site conditions, like ventilation and dehumidification, can help.