IN-SITU RH TESTING (ASTM F2170): PROCEDURE & INTERPRETATION

OVERVIEW

The in-situ RH test measures internal relative humidity within a concrete slab. It provides a realistic indication of long-term moisture behavior and is the industry standard for evaluating slab readiness for resinous flooring systems.

Test Procedure Summary

1. Drill test holes to 40% depth of slab thickness (20% for drying from both sides).
2. Insert RH sleeves and allow acclimation (typically 24 hours).
3. Insert calibrated RH probes into the sleeves.
4. Record RH readings once stabilized.

Interpreting Results

- Most coatings require ≤ 75–80% RH.
- MV 2112 Moisture Mitigation Primer tolerates up to 95% RH.
- Higher RH means elevated long-term moisture presence.

Why It Matters

- RH tests reflect internal moisture, not surface dryness.
- More accurate than calcium chloride for modern flooring systems.
- Helps prevent moisture-driven failures.

Best Practices

- Follow ASTM F2170 strictly.
- Test in conditioned space (final HVAC on).
- Use minimum 3 tests for first 1000 sq ft plus 1 per additional 1000 sq ft.
- Always document readings.