

SUBSTRATE DIAGNOSTICS CHECKLIST & ASSESSMENT GUIDE

OVERVIEW

Successful installation of resinous flooring begins with a thorough substrate diagnostic evaluation. Concrete slabs vary widely in age, density, moisture content, construction method, and previous usage. A structured diagnostic process ensures that all variables—moisture, contamination, structural conditions, and environmental factors—are identified before coatings are applied. This bulletin provides a comprehensive assessment checklist to standardize pre-installation inspections.

1. Moisture & Environmental Factors

- RH testing (ASTM F2170).
- MVER testing (ASTM F1869).
- Dew point verification.
- Ambient temperature and humidity levels.

2. Surface Condition Evaluation

- Surface hardness and density (Moh's scratch test)
- Laitance presence.
- Efflorescence or moisture staining (pH test).
- Visible cracks, spalls, pits, joints.
- Curling, hollow areas, or delamination.

3. Contamination Checks

- Oil, grease, chemicals, food-grade contaminants (water droplet test).
- Curing membranes, adhesives, or sealers.
- Densifiers or water repellents.
- Biological residues or mold.

4. Mechanical Integrity

- Soundness of surface layer (rebound hammer test).
- Slab movement or differential settlement.

Best Practices

- Document all findings with photos and test results.
- Share diagnostics with project stakeholders.
- Address all moisture or contamination issues before installation.
- Use diagnostics to determine the required CSP and prep method.