Henry® Pumadeq™ System Coating Adhesion Test Guidelines

Substrate preparation is essential to promoting adhesion of the Pumadeq System, as well as to the overall success of the project. Refer to product specific technical data sheet (TDS) and other published Pumadeq System Tech-Talk Bulletins to verify installation requirements. See product specific TDS for substrate qualification/preparation and resin application rates.

General adhesion test conditions
In addition to moisture testing and concrete surface profile (CSP 3-5) confirmation, Henry recognizes ASTM D7234, Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers, to aid in substrate verification prior to installation of the Pumadeq System. ASTM D7234 measures the bond strength of Pumadeq Primer 20 or Pumadeq GC Primer over concrete by securing a loading fixture (dollie) to cured primer and applying a perpendicular tensile load at a controlled rate.

ASTM D7234 is conducted via a “Pull-Off Tester”. Commonly recognized brands include, but are not limited to, DeFelsko®, DFD® Instruments and Elcometer®.

Adhesion test guidelines
In some cases, the primer bond to the concrete is so tenacious that the test may result in concrete breakage at the test area as opposed to separation of the primer from the concrete. For instances where a passing adhesion test results in concrete damage, refer to Tech-Talk: Pumadeq System Substrate Preparation Guidelines.

1. Minimum number of tests: 2; (1) test per 5,000 sq.ft.
2. Minimum primer adhesion to concrete: 200 psi. or greater than concrete cohesive strength.

Example of ASTM D7234 test indicating primer adhesion strength to concrete is greater than concrete cohesive strength

Source: Figure 2 excerpt from ASTM D7234 – Standard Test Method for Pull-Off Adhesion Strength of Coatings on Concrete Using Portable Pull-Off Adhesion Testers