

GENERAL

WestWood systems can be applied to a wide range of substrates, including concrete, wood, metals, plastics, insulation, specialty cover boards, existing single-ply membranes, built-up roofing, and coatings. As with all liquid-applied systems, a sound, stable substrate is essential for proper adhesion and performance.

The surface must be clean, dry, and free of loose material, oil, grease, contaminants, abrupt level changes, waterproofing agents, curing compounds, and protrusions that could affect the membrane.

Before application, evaluate the substrate for:

- Suitability to receive WestWood system
- Required surface preparation for proper adhesion

For recovery applications over existing membranes, coatings, or roofs, verify the existing material is adequately bonded. Once confirmed, application of the WestWood system may proceed.

RECOVERING EXISTING MEMBRANES AND COATINGS

WestWood systems may be applied over existing, well-adhered single-ply membranes, built-up roofing, and coatings when used in recovery applications. In these cases, adhesion is limited to the surface of the existing membrane or coating, and the WestWood warranty applies only to that interface.

The existing surface must be intact and firmly bonded to the substrate, with sufficient adhesion to resist design wind uplift and dynamic loads as required by building codes for the structure, cladding, or new waterproofing system.

RECOMMENDED GUIDELINES

WestWood recommends a minimum bond strength of 116 psi (0.8 N/mm²) for roofing applications and 219 psi (1.5 N/mm²) for concrete in traffic-bearing systems. Requirements may vary based on substrate type and project conditions.

The substrate must support the design uplift pressures or dynamic loads defined by applicable building codes.

Bond testing should be conducted by the contractor before application and at regular intervals during installation. Perform at least three (3) tests per 5000 ft² (464.5 m²). Adequate adhesion is typically confirmed by resin transfer (residual resin remains on the substrate). If bond strength falls below the minimum, additional surface preparation is required.

Once surface prep is complete, apply the appropriate WestWood primer if needed, followed by the membrane system. Refer to WestWood's **Substrate Preparation Guidelines** and **Priming Guidelines** for full instructions.

FIELD ADHESION TESTING METHODS

Use standard methods to evaluate bond strength, such as knife tests, peel strips, or portable pull-off testers. These tests help assess adhesion quality and identify the mode of failure—whether adhesive (at the interface) or cohesive (within the membrane, coating, or substrate).

PORTABLE ADHESION TESTER

A portable pull-off adhesion tester is the most reliable method for evaluating adhesion strength of WestWood systems on both traffic and non-traffic bearing applications. These tests measure tensile resistance in accordance with ASTM D4541, ISO 4624, and BS EN 24624.

Unlike knife or peel tests, which measure shear resistance, pull-off tests provide quantitative results. They are especially useful for validating adhesion during field quality control and system performance checks.

PORTABLE HYDROLIC ADHESION TESTER

Hydraulic testers use a dolly affixed to the membrane or coating. A controlled force is applied until the dolly detaches, and the measured force indicates the tensile bond strength. Failure typically occurs at the weakest point—dolly, adhesive, coating, or substrate.

Hydraulic testers may be manual or pneumatic, and may use fixed or self-aligning dollies. Best accuracy is achieved with self-aligning units and a perpendicular pull to the test surface.



PEEL TEST

Used for non-traffic applications, the peel test involves embedding fabric strips into the resin and allowing it to cure. Once cured, the fabric is pulled back to assess adhesion based on the resistance and material removed.

Adequate adhesion is indicated by resin transfer (residual resin on the substrate). This method is described in ASTM D6677.

KNIFE TEST

The knife test is a quick method for non-traffic applications. A utility knife is used to cut an "X" through the membrane or coating at a 30°–45° angle. At the intersection, the point of the knife is used to lift the material.

Adhesion is considered sufficient if resin transfer is observed. Refer to ASTM D6677 for standardized guidance.

OTHER TESTS

Additional lab-based tensile tests can be used to evaluate elongation, tensile strength, and stiffness of the membrane or coating. These include:

- Tensile strip testing on membrane-to-substrate assemblies
- Adhesion of organic coatings to plastic substrates (e.g., ASTM D2370, ASTM D5179)

These tests are generally used for materials characterization rather than field evaluation.



ROOFING SOLUTIONS



WATERPROOFING



FLASHING SOLUTIONS



TRAFFICABLE SURFACES