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PSI Tech-Note

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Controlled Flow Water-Test Procedure

1. Purpose and Scope

1.1 This test method measures the resistance of water infiltration and penetration of water under controlled and moving water pressure to installed waterproofing membrane. It is applicable to all types of membranes, including sheet waterproofing, flashings, liquid membranes and those treated with a water resistant or water repellent finish in lieu of 24 hour hydrostatic flood test

1.2 Water resistance depends on the repellency of the membrane, the lap adhesion of the membranes and the adhesion to the deck and adjacent substrates.

1.3 The results obtained by this method may not be the same as the results obtained by hydro-static water testing or resistance to rain or water spray.

2. Principle

2.1 One surface of the deck specimen is subjected to a controlled flowing water rather than hydrostatic pressure, increasing at a constant rate, until the points of leakage appear on its under surface or the deck is determined to be waterproof. The water must be applied from above the deck specimen from the low point of drainage working upward to the top of the horizontal deck and then to the flashing.

2.2 The moving water test allows for the testing of water drainage from the weep system. The testing will provide leak analysis in a controlled water test while allowing for the location and repair of leaks during the water test.

2.3 The flowing water test determines the resistance to leaks from defined areas rather than the overall deck. It allows for the testing of flashings, thresholds, window and door wraps in controlled areas after the horizontal surface has been tested.

3. Procedure

3.1 Prior to test of the waterproofing, visually inspect membranes, flashings, and laps for water-tightness. Determine weep locations and ascertain that weeps will function. Applied sealants should be fully cured.

3.2 Determine the low end of the outside deck surface and apply moving water from water hose at a controlled flow. Do not use water spray. Be prepared to use a quick shut off valve at the end of the water hose.

3.3 Allow the water to flow at a rate of 1-1/2 gallons per minute over an area of 10-12 square feet at the outside edge of the deck. Station an inspection person under the deck area to notify of any leaks that may occur.

3.4 Allow the water to flow over the horizontal surface only. Test for 5-7 minute intervals, repair any leaks by drying the surface and applying compatible joint sealant and continue testing.

3.5 At 5-7 minute intervals, move the water to the next area along the outside edge of the deck. Repair leaks, if any, as they occur and retest area.

3.6 After testing the horizontal areas, move to the outside edge of the wall flashing and run water from the top outside of the flashing edge downward in four or five foot lengths.

3.7 After the flashings have been tested, further testing may be completed bypassing the installed waterproofing to locate potential water entry points above the waterproofing level.

4. Protection

4.1 After the water testing has been completed, the membrane should be protected from damage by preventing other trades from working on the existing waterproofing. Any damaged membrane or coating should be repaired according to manufacturer's recommendations.

4.2 Concrete or topping should be placed within a 72 hour period over the installed waterproofing to protect the membrane from physical and Ultra-Violet damage.

Please visit our website at: www.polytuffus.com. Consult the related data sheet or call 866.977.8833 for further information.

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