

Cladding Fastener Treatment with DensElement®Barrier System

Extensive water penetration and air infiltration testing was performed on the DensElement™ Barrier System for code compliance for use as a water-resistive and air barrier. The DensElement™ Barrier System passed ASTM E331 for water penetration testing and ASTM E2357 for air infiltration testing.

In addition to the required testing, the DensElement™ Barrier System was tested under ASTM E331 with two additional untreated brick ties installed through the sheathing. At test chamber air pressure three and one-half times greater than code requirements, no leaks were identified at the cladding fasteners. Additional air leakage testing was conducted using ASTM E2178. Multiple brick ties were installed through the DensElement™ Sheathing. All brick ties were left untreated with each brick tie penetrating through the sheathing four times. The test results demonstrated that even with multiple brick ties, the DensElement™ Barrier System exceeded code air infiltration requirements.

Based on the test results, treatment of cladding fasteners may not be necessary with the DensElement™ Barrier System. However, leaks at cladding fasteners may occur on any water-resistive barrier (WRB), regardless of whether fastened through the DensElement™ Barrier System or through a fluid-applied WRB membrane over gypsum sheathing. Therefore, the design professional should also consider factors such as building design, location, rain/wind load, jobsite conditions and additional cladding details to determine the need for cladding treatment as well as to ensure proper design and drainage of the system. For more information regarding cladding fasteners and the DensElement™ Barrier System refer to the GP Gypsum white paper “Cladding Attachments Put to the Test”.

The white paper, installation details, and full limited warranty details for the DensElement™ Barrier System can be found on DensElement.com. The DensElement™ Barrier System consists of three system components: DensElement™ Sheathing, PROSOCO R-Guard® FastFlash® liquid flashing and R-Guard® PorousPrep® water-based primer. When properly installed, the DensElement™ Barrier System is a vapor permeable water-resistive and air barrier (WRB-AB) when the joints, sheathing fasteners, penetrations, openings and transitions are properly sealed with PROSOCO FastFlash® liquid flashing. The system solution eliminates the need to cover the face of the sheathing with traditional WRB-AB systems, such as building wrap, fluid-applied membranes or self-adhered membranes.

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