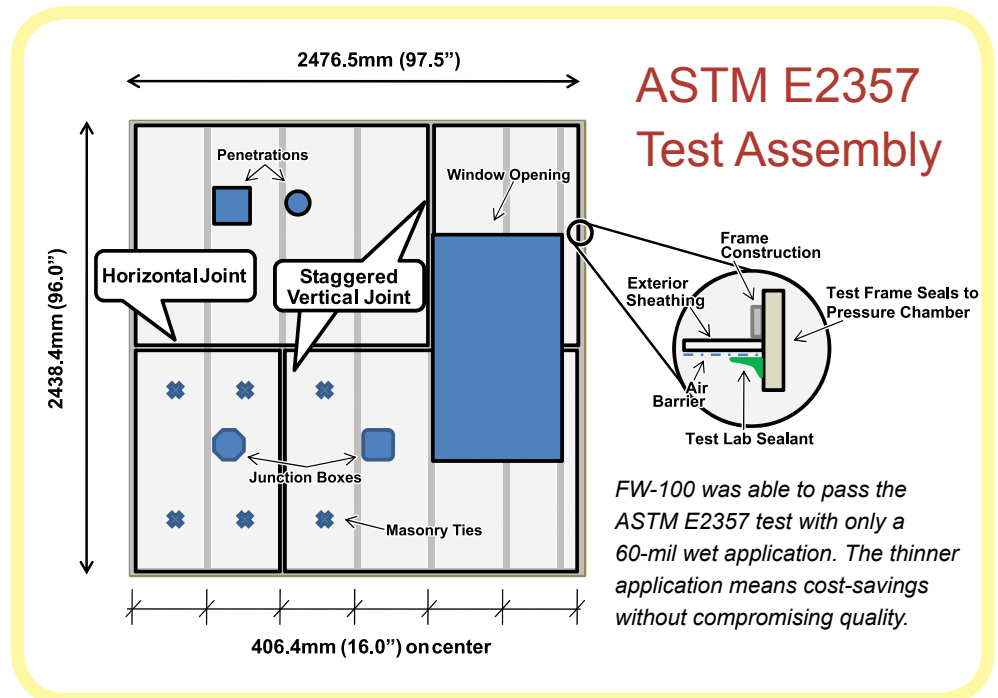


Wall Guardian's FW-100 Air Barrier Assembly Meets and Exceeds ASTM E2357

STS Coatings is proud to announce that Wall Guardian's FW-100 Vapor Permeable Air Barrier System has passed and far exceeded the requirements of ASTM E2357 testing for Air Barrier System Performance in an independent, third-party accredited laboratory test.

ASTM E2357 was developed to test air barrier assemblies as a whole, versus individual air barrier components, to creating a more realistic approach to air barrier testing. The manufacturer determines the air barrier assembly, consisting of the air barrier material and the accessories used for joining, sealing and flashing. The assembly as a whole is then tested against the ASTM E2357 Standard. The major benefit to the building designers is that the responsibility of product compatibility is placed on the manufacturer.



Testing for ASTM E2357

For the FW-100 assembly test, an 8' x 8' exterior wall was constructed in accordance with the ASTM E2357 description. ASTM requires that the wall have tie-ins to a roof and a foundation wall, duct, pipe and electrical outlet penetrations and a window opening; mimicking real-world building wall situations. The wall for FW-100's test was constructed using steel studs placed 16" on-center and GP DensGlass Gold sheathing. All joints were sealed with GreatSeal LT-100 Liquid Tape and the window opening and penetrations were flashed with UT-40 Universal Tape and GreatSeal LT-100. STS Coatings' Wall Guardian FW-100 was applied directly to GP DensGlass Gold sheathing panels at a 60-mil wet thickness (35-mil dry) to complete the assembly.

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FW-100

Vapor Permeable Air Barrier

The wall was mounted into a test chamber where it was subjected to the specified wind-load schedule in accordance with the ASTM E2357 guidelines. The test is comprised of three load stages, with both positive and negative loads during each stage, in consecutive sequence. The air leakage is then tested between each stage.

ASTM E2357 Testing Stages:

- 1. Stage One:** The wall is subjected to a sustained load of 600 Pa (12.5 psf or an equivalent to 70 mph) for one hour.
- 2. Stage Two:** The wall is subjected to a cyclic load of 800 Pa (16.7 psf or an equivalent to 81 mph) that pulses for three seconds. The pressure is then released till it returns to 0 Pa. The second part of the test is performed 2000 times with positive loads and then 2000 times with negative loads.
- 3. Stage Three:** In the “wind gust” stage, the wall is subjected to 1200 Pa (25 psf or an equivalent to 99 mph) for three seconds, again in both positive and negative directions.



Results: FW-100 Exceeds Standards Set Forth by Air Barrier Association of America (ABAA)

After each of the three stages of the test, the assembly was inspected for damage and failures. FW-100's assembly showed no sign of damage or failure after each stage of testing. **The final test results showed air leakage at 0.0004 CFM/ft²** This rating passes the ASTM E2357 Standard and is 100 times below the allowed air leakage permitted by the ABAA (.04 CFM/ft²).

FW-100 has shown the best results in ASTM E2357 testing among vapor permeable air barrier assemblies tested. Moreover, the assembly passed with only a 60-mil wet application of the FW-100. This is significantly thinner than the application in similar fluid-applied vapor permeable air barrier assemblies that have passed this test. The thinner application of this highly-engineered air barrier leads to one of the lowest installed-cost air barrier systems in the USA, resulting in a huge savings to the building owner while achieving the “Best by Test” performance.

FW-100 Air Barrier Assembly Components

- > FW-100 Vapor Permeable Air Barrier
- > GreatSeal LT-100 Liquid Tape
- > UT-40 Universal Tape
- > BP-40 Primer

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