

PRODUCT **34000 ForcFront Storm Series Storefront**
 2-1/2" x 5" (non thermal and thermal)

TEST RESULTS

Air Infiltration	ASTM E283, TAS 202	0.06 cfm/ft² @ 6.24 psf
Static Pressure Water Resistance	ASTM E331, TAS 202	15 psf
Dynamic Pressure Water Resistance	ASTM E331	15 psf
Structural – Design Load	ASTM E330, TAS 202	up to +/- 70 psf
Structural – Overload	ASTM E330, TAS 202	up to +/- 105 psf
Large Missile Impact/Cycling	ASTM E 1996, ASTM E 1886, TAS 201, TAS 203	D missile - HVHZ
Florida Product Approval (FPA)		FL# 17192.1 (E34000) FL# 17192.2 (T34000)
Texas Department of Insurance (TDI)		CWFS-44

TEST LAB

INTERTEK – ATI
 West Palm Beach, FL 33407

Report Number	D4116.01-450-18	D4091.01-450-18
Test Date	5/30/14	5/22/14
Report Date	8/8/14	8/4/14

Reference above reports and state approvals for complete test specimen description, data, and limits of use.

Tubelite Representative:  (sign) 9/28/2019 (date)
Tim Fookes - Vice President of Engineering (title)

TEST METHODS

Air Infiltration: *ASTM E283-04, Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.* Testing was conducted at 6.24 psf positive static air pressure difference.

Static Pressure Water Resistance: *ASTM E331-00, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, Curtain Walls by Uniform Static Air Pressure Difference.* Testing was conducted at 15 psf positive static air pressure difference for 15 minute duration. Water applied at a minimum rate of 5 gal/ft²/hr.

Dynamic Pressure Water Resistance: *AAMA 501.1-05, Standard Test Method for Water Penetration of Windows, Curtain Walls, and Doors Using Dynamic Pressure.* Testing was conducted with a dynamic pressure equivalent of 15 psf for a 15 minute duration. Water applied at a minimum rate of 5 gal/ft²/hr.

Structural Performance: *ASTM E330-02, Standard Test Method for Structural Performance of Exterior Windows, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.* Testing was conducted up to +/- 70 psf design loads and up to +/- 105 psf overloads. Allowable Criteria: Design - L/175 deflection normal to wall plane for clear spans up to 13'-6". Overload – net permanent set shall not exceed 0.2% of the clear span.

Hurricane Impact/Cycling:

ASTM E 1886-05, Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials

ASTM E 1996-09, Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes

TAS 201-94, Impact Test Procedures

TAS 202-94, Criteria for Testing Impact & Non Impact Resistant Building Envelope Components Using Uniform Static Air Pressure

TAS 203-94, Criteria for Testing Products Subject to Cyclic Wind Pressure Loading