HYGROTHERMAL SNAPSHOT

One-Inch Exterior Insulation on Framed Wall

Atlanta, Georgia | 33.37°N 84.26°W | Elev. 1010 ft | -5 UTC

RATING F

ASSEMBLY COMPONENTS

1. Fiber Cement, Painted 0.31 in
2. Extruded Polystyrene 1 in
3. Housewrap WRB 0.008 in
4. OSB Sheathing 0.492 in
5. Fiberglass Batt Insulation 5.5 in
6. Interior Gypsum Board 0.492 in
7. Interior Paint & Primer 0.003 in

PARAMETERS

Test Duration 2 Yrs
Interior Moisture Low
Interior Temperature 69.8°F ± 1.8°F
Interior Humidity 45% ± 15%
Orientation / Inclination N / 90°
Exterior Coating -
Interior Coating -
Rain Exposure / Deposition 1 1 / 0.5
Rain Penetration 1 (%) 1%
Rainscreen / ACH No / 0

CLIMATE NORMALS

Temp. Daily Max / Min 71.5°F / 52.1°F
RH Daily Max / Min 82% / 56%
Rainfall 49.7 in
Snowfall 2.9 in
Wind Speed 8.4 mph
Wind Direction 320°
Station Air Pressure 28.9 in
Heating Degree Days (65 F) 2,768
Cooling Degree Days (65 F) 1,883
Modeled Climate Data WUFI

WINTER ASSEMBLY PROFILE

SUMMER ASSEMBLY PROFILE

MOLD AND CORROSION RISKS AT PREDICTED RH AND SURFACE TEMPERATURES (YEAR 2)

PERFORMANCE RATINGS

Ratings are based on ASHRAE Standard 160. Resistant materials are evaluated based on hourly 30-day running averages at ≥95% RH, 41°F. P = Pass; Criteria met
C = Conditional; Criteria compliance is uncertain
F = Fail; Criteria not met for a 30-day running average
CF = Critical Fail; Criteria not met at multiple 30-day running averages

ABOUT THIS REPORT

These findings are offered for informational purposes only and are not intended as a comprehensive hygrothermal analysis. Design considerations should not rely on this report as the sole means for predicting assembly performance. Uncertainties and limitations inherent to hygrothermal modeling apply to these findings. For more information, visit our website at www.built-environments.com.

2. ASTM MNL 18: Moisture Control in Buildings.