HYGROTHERMAL SNAPSHOT

Exterior Mineral Wool Insulation on Framed Wall
Minneapolis, Minnesota  |  44.52°N  66.00°W  |  Elev. 872 ft  |  -6 UTC

RATING  Pass  

ASSEMBLY COMPONENTS

1. Fiber Cement, Painted  0.31 in
2. Rainscreen Air Space  0.75 in
3. Mineral Wool Board  1.5 in
4. Housewrap WRB  0.008 in
5. OSB Sheathing  0.492 in
6. Fiberglass Batt Insulation  5.5 in
7. Polyethylene VR  0.039 in
8. Interior Gypsum Board  0.492 in
9. 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  5 / 90°
Exterior Coating  -
Interior Coating  -
Rain Exposure / Deposition  1 / 0.5
Rain Penetration  1%
Rainscreen / ACH  Yes / 120

CLIMATE NORMALS

Temp. Daily Max / Min  53.9°F / 35.9°F
RH Daily Max / Min  79% / 59%
Rainfall  30.6 in
Snowfall  54.4 in
Wind Speed  9.7 mph
Wind Direction  320°
Station Air Pressure  29.1 in
Heating Degree Days (65 F)  7,580
Cooling Degree Days (65 F)  753
Modeled Climate Data  WUFI

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

- OSB Exterior
- OSB Interior
- ASHRAE 30-Day Criteria
- 95% RH; 41°F

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.

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