

# HYGROTHERMAL SNAPSHOT

## Framed Wall: Metal Panel + Exterior Insulation

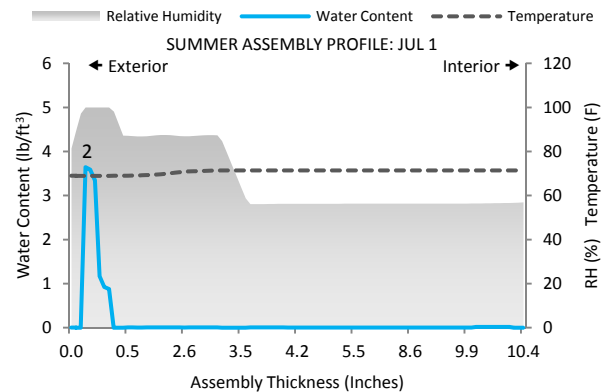
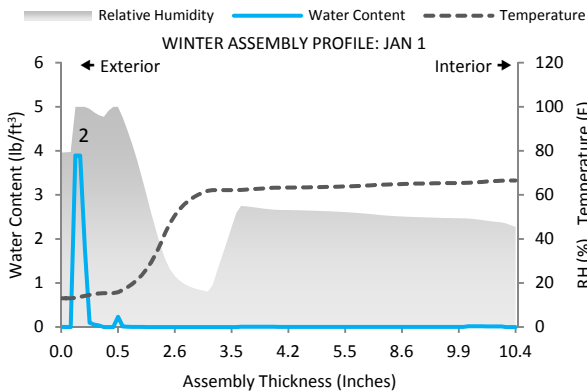
Minneapolis, Minnesota | 44.52°N 66.00°W | Elev. 872 ft | -6 UTC

**RATING**

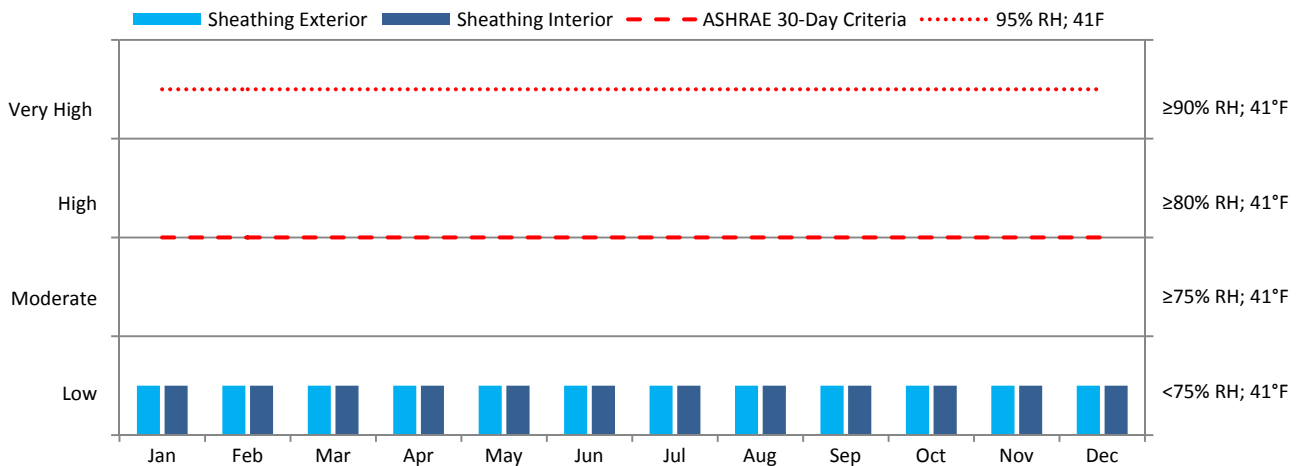
Pass



ASSEMBLY COMPONENTS			PARAMETERS		CLIMATE NORMALS	
1	Metal Panel	0.039 in	Test Duration	2 Yrs	Temp. Daily Max / Min	53.9°F / 35.9°F
2	Air Space	0.375 in	Interior Moisture	Low	RH Daily Max / Min	79% / 59%
3	Foil-Faced Polyisocyan. Ins.	3 in	Interior Temperature	69.8°F ± 1.8°F	Rainfall	30.6 in
4	Vapor Impermeable WRB	0.039 in	Interior Humidity	45% ± 15%	Snowfall	54.4 in
5	Gypsum Sheathing	0.492 in	Orientation / Inclination	N / 90°	Wind Speed	9.7 mph
6	Air Space: Wall Cavity	6 in	Radiation Absorptivity	-	Wind Direction	320°
7	Interior Gypsum Board	0.492 in	Radiation Emissivity	-	Station Air Pressure	29.1 in
			Rain Exposure / Deposition <sup>1</sup>	1.2 / 0.5	Heating Degree Days (65 F)	7,580
			Rain Penetration <sup>1</sup> (▶)	1%	Cooling Degree Days (65 F)	753
			Rainscreen / ACH	Yes / 0	Modeled Climate Data	ASHRAE-Y3



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



#### PERFORMANCE RATINGS

Ratings are based on ASHRAE Standard 160<sup>1</sup>. 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

1. ASHRAE Standard 160: Criteria for Moisture-Control Design Analysis in Buildings.

#### 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<sup>2</sup>. For more information, visit our website at [www.built-environments.com](http://www.built-environments.com).

2. ASTM MNL 18: Moisture Control in Buildings.