

HYGROTHERMAL SNAPSHOT

ICF Wall Construction

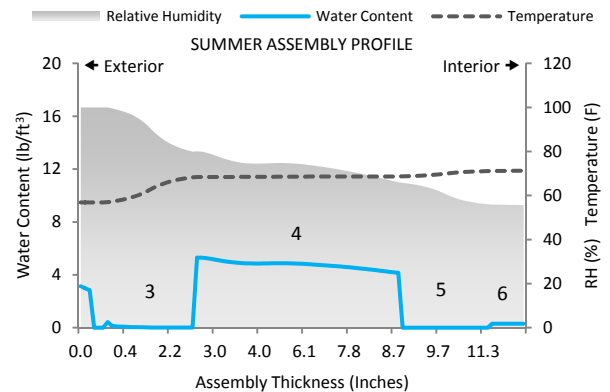
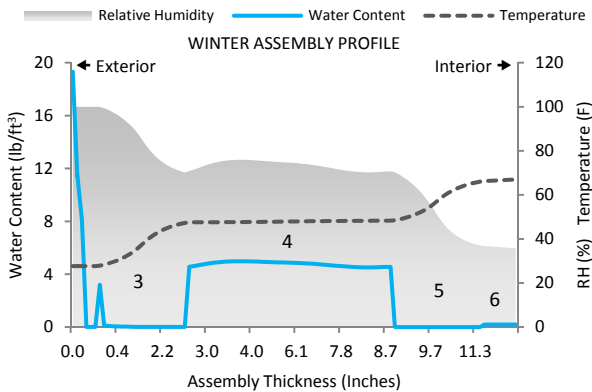
Pittsburgh, Pennsylvania | 40.29°N 80.12°W | Elev. 1,203 ft | -5 UTC

RATING

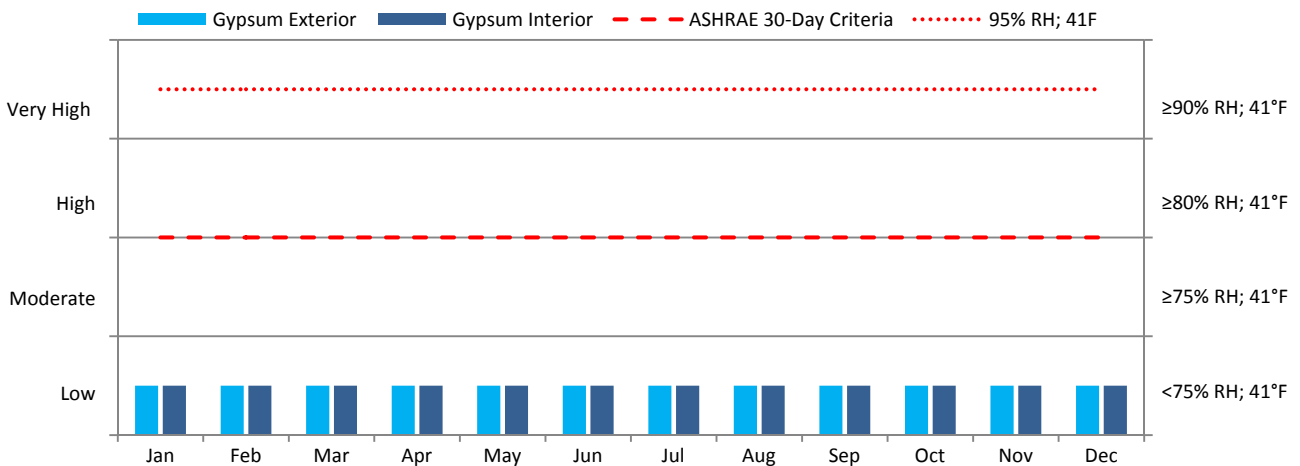
Pass



ASSEMBLY COMPONENTS			PARAMETERS		CLIMATE NORMALS	
1	Fiberglass Siding	0.315 in	Test Duration	2 Yrs	Temp. Daily Max / Min	60.6°F / 41.9°F
2	Housewrap WRB	0.008 in	Interior Moisture	Low	RH Daily Max / Min	79% / 58%
3	EPS: ICF Outer Shell	2.625 in	Interior Temperature	69.8°F ± 1.8°F	Rainfall	38.19 in
4	Concrete: ICF Core	6 in	Interior Humidity	45% ± 15%	Snowfall	41.4 in
5	EPS: ICF Inner Shell	2.625 in	Orientation / Inclination	N / 90°	Wind Speed	7.9 mph
6	Interior Gypsum Board	0.492 in	Exterior Coating	-	Wind Direction	270°
			Interior Coating	-	Station Air Pressure	28.74 in
			Rain Exposure / Deposition ¹	1 / 0.5	Heating Degree Days (65 F)	5,710
			Rain Penetration ¹ (▶)	1%	Cooling Degree Days (65 F)	736
			Rainscreen / ACH	No / 0	Modeled Climate Data	WUFI



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



PERFORMANCE RATINGS

Ratings are based on ASHRAE Standard 160¹. 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 findings². For more information, visit our website at www.built-environments.com.

2. ASTM MNL 18: Moisture Control in Buildings.