



Morrison Hershfield

“The use of effective R-values when evaluating the thermal resistance of an assembly is preferable to using the nominal R-value of the insulation alone. The benefits of this approach have been demonstrated in results obtained through laboratory tests such as ASTM C1363 and by data published in ASHRAE 90.1. Quik-Therm Insulation Solutions Inc. has undertaken a program of full scale thermal performance testing to ASTM C1363-05 Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus.”

- Mark Lawton - Senior Building Scientist

ASTM C1363 Test Results

Description of Test Samples Starting from Exterior	Overall Thermal Resistance (hr·ft ² ·F/Btu), R-value (R _u)
Cement board cladding, 2" Quik-Therm MPI, 7/16" OSB, 2x4 wood studs, empty cavity, 1/2" drywall	13.2
3" Quik-Therm MPI, 3/8" drainage gap, 7/16" OSB, 2x4 wood studs, empty cavity, 3/8" drywall	17
3.5" Quik-Therm, 7/16" OSB, 2x4 wood studs, empty cavity, 1/2" drywall	19.5
Concrete Wall, 6" Quik-Therm, steel framing, empty cavity, 1/2" drywall	29.9
2" Quik-Therm, 7/16" OSB, 2x4 wood studs, R-13 fiberglass batts, 3/8" drywall	23.1
2" Quik-Therm, 7/16" OSB, 2x6 wood studs, R-20 fiberglass batts, 1/2" drywall	28.3
Wood cladding, 3/8" rain screen, 3" Quik-Therm, 2x4 wood studs, R-12 fiberglass batts, 1/2" drywall	29.96

Quik-Therm Effective Thermal Resistance

Quik-Therm Thickness	2x4 Wood Frame with R-12 Batt	2x6 Wood Frame with R-20 Batt	Wood Frame Empty Cavity	2x6 Steel Frame with R-20 Batt	Interior Masonry	Exterior Masonry
1.5"	21	26	11	17	11	8
2"	23	28	13	19	13	10
3"	28	32	17	23	18	15
4"	32	36	21	27	22	19
5"	36	40	25	31	26	23
6"	40	44	29	35	30	27

Nominal R-Value Testing ASTM C-518 = R-4.18 | Steel Framing ASHRAE Table A3.13



Tested By Canadian Accredited Laboratories. Supported By Building Science



Property	Nominal Value			Test Method
Dimensional Stability	1.5			ASTM D2126
Maximum Linear Change, %	1.5			ASTM D2126
Length Tolerance, mm (in)	±3.2 (±0.125)			—
Width Tolerance, mm (in)	±1.6 (±0.063)			—
Nominal R-Value	Type 1 3.81	Type 2 4.18	Type 3 4.40	ASTM C518
Nominal Density, pcf (kg/m ³)	1.0 (16)	1.4 (23)	1.8 (29)	ASTM D1622
Compressive Strength, psi (kPa)	12.6 (87)	19.7 (136)	30 (207)	ASTM 1621-04
Water Vapour Transmission, perms	<1.0			ASTM E96
Air Permeance (L/s·m ²)	0.0139			ASTM E2178-13
Effective R-Value Testing	See Table Above			ASTM C1363
Limiting Oxygen Index	26 %			ASTM D2863-97
Flame Spread	250			CAN/ULC - S102.2
Smoke Developed	410			CAN/ULC - S102.2

6" Quik-Therm and fiber cement board siding meets the requirements of CAN/ ULC-S101 as required by Article 3.2.3.8. Test Report: T1035-4 QAI Laboratories.