



TECHNICAL BULLETIN

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Air and Water Infiltration 238T 24 Ga. / 138T 24 Ga.

On April 3, 2009, McElroy Metal, Inc. tested its 238T Panel for air leakage and water penetration.

TEST METHODS:

Air Leakage: ASTM E1680-95, "Rate of Air Leakage Through Exterior Metal Roof Panel Systems"

Water Penetration: ASTM E1646-95, "Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference"

TEST SPECIMEN:

McElroy Metal, Inc. 24 Ga. 16 in. wide 238T Roof Panels were attached to purlins with 6" fixed panel clips using (2) #12-14 x 1 1/4" hex head self drilling fasteners per clip. Factory applied sealant was used in the seam cap. The seam cap was seamed onto the panel ribs.

TEST RESULTS:

*Results are extrapolated to different panel widths.

Specimen	Air Infiltration			Water Penetration			
	Static Pressure Differential (psf)	Air Infiltration rate (cfm/lf)	Air Infiltration rate (cfm/sf)	Static Pressure Differential (psf)	Rate (gal./hr/sf)	Test Duration (min)	Water Infiltration
238T / 138T 16" 24** Ga.	+/- 1.57	0.0002	0.0001	20	5	15	None
238T / 138T 16" 24** Ga.	+/- 4.0	0.0022	0.0017				
238T / 138T 16" 24** Ga.	+/- 6.24	0.0030	0.0022				
238T / 138T 16" 24** Ga.	+/- 20.0	0.0037	0.0028				
238T / 138T 18" 24** Ga.	+/- 1.57	0.0002	0.0001	20	5	15	None
238T / 138T 18" 24** Ga.	+/- 4.0	0.0022	0.0013				
238T / 138T 18" 24** Ga.	+/- 6.24	0.0030	0.0020				
238T / 138T 18" 24** Ga.	+/- 20.0	0.0037	0.0025				
238T 24" 24** Ga.	+/- 1.57	0.0002	0.0001	20	5	15	None
238T 24" 24** Ga.	+/- 4.0	0.0022	0.0011				
238T 24" 24** Ga.	+/- 6.24	0.0030	0.0015				
238T 24" 24** Ga.	+/- 20.0	0.0037	0.0019				

Test Report No. : 32-0090T-09G

Dated : May 30, 2009

**Test results are valid for heavier gauges or thicknesses.

**Test results are valid for 138T panels based on identical seam configuration.

**CORPORATE OFFICE
SHREVEPORT, LOUISIANA**