



TECHNICAL BULLETIN

Issue Date : February 29, 2000**Revised: February 5, 2013****No. 01-110-00**

Air and Water Infiltration MasterLok-90 24 Ga.

On November 8, 1999, McElroy Metal, Inc. tested its MasterLok-90 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. 24 in. wide MasterLok-90 Roof Panel with 3/16" bead of Q-41-20 Robofoam Mastic Sealant at sidelaps. Panels were attached to purlins using 1/4-14 x 1-1/4 fasteners.

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
ML-90 24 in. 24** Ga.	-6.24	0.019	0.010	2.86	5	15	None
ML-90 24 in. 24** Ga.	+6.24	0.022	0.011	2.86	5	15	None
ML-90 24 in. 24** Ga.	-1.57	0.014	0.007				
ML-90 24 in. 24** Ga.	+ 1.57	0.008	0.004				
*ML-90 18 in. 24** Ga.	-6.24	0.019	0.013				
*ML-90 18 in. 24** Ga.	+6.24	0.022	0.015	2.86	5	15	None
*ML-90 18 in. 24** Ga.	- 1.57	0.014	0.009				
*ML-90 18 in. 24** Ga.	+ 1.57	0.008	0.005				

Test Report No. : T216-99

Dated : November 8, 1999

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

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