



classic products

the best metal roofs under the sun

8510 Industry Park Drive Piqua, Ohio 45356

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TEST RESULTS FLORIDA SOLAR ENERGY CENTER

SUMMARY

Starting with the summer of 1999 and continuing this year, Florida Solar Energy Center (FSEC) has been including one metal roofing system produced by Classic Metal Roofing Systems with the testing done at their Flexible Roof Facility (FRF). The results of this testing clearly substantiate the energy efficiency of our products and provide further confirmation of testing which FSEC did for Classic in 1985.

TEST DESCRIPTION

The FRF is built to allow side-by-side comparison of six different roofing systems. Analysis is done as to the mid-attic temperatures reached in these test cells during a three month period each summer. The FRF is located near Cocoa Beach, Florida and, as such, has fairly consistent weather from summer to summer, allowing analysis to occur between the various three-month test periods. The mid-attic temperature readings are further extrapolated into air conditioning loads and energy usage ratings including allowances for attic ventilation and air conditioning ductwork running through the attics.

FSEC has tested various roofing products including glazed white clay tile, black asphalt shingles, red "terra cotta" clay tile, and white steel standing seam. The products they have tested for Classic are as follows: 1999 – White Aluminum Shake; 2000 -- Medium Brown Aluminum Shake; 2001 -- Reflective ("Hi-R") Medium Brown Aluminum Shake; 2002 – Reflective ("Hi-R") Ivory Aluminum Shake.

RESULTS HIGHLIGHTS

Our products have consistently shown favorable results in terms of average high temperatures during the test periods. Following is a summary table of those numbers.



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AVERAGE MID-ATTIC HIGH TEMPERATURES

PRODUCT	1999	2000	2001	2002
White Clay Tile	93.9°	95.5°	99.1°	
Red Clay Tile	109.8°	110.0°	107.9°	
Black Asphalt Shingle	122.7°	121.4°	119.7°	116.7°
White Standing Seam	98.8°	98.5°	102.2°	93.7°
White Aluminum Shake	92.9°			
Brown Aluminum Shake		102.9°		
Hi-R Brown Aluminum Shake			98.4°	
Hi-R Ivory Aluminum Shake				93.3°
Galvalume 5V Crimp				97.1°
Galvanized 5V Crimp				99.4°
Outside Air	89.1°	89.4°	87.8°	85.9°

In the 2001 Detailed Summary, the Hi-R Brown Aluminum Shake was extrapolated out to a 33.5% reduction in cooling load on a typical 2000 square foot home in comparison to the black asphalt shingles. This allows for air conditioning duct heat gain. The 2002 study shows a 38% reduction when comparing the Hi-R Ivory Aluminum Shake to black asphalt shingles.



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Many of the tax credit programs and other energy initiatives currently being developed here in the United States to encourage the use of energy efficient roofing materials and other building products are being driven by the major electric utilities. The primary concern of the major electric utilities is to limit demand during peak hours. In essence, peak demand dictates the maximum capacity which the electric producers must have. If they can limit peak demand, they can help to avoid having to expand their capacity. Our products meet their needs very well with the 2001 and 2002 results clearly showing our product as the most efficient during peak hours.

The 2001 and 2002 test reports include comments that allude to the fact that the airspace beneath of our shake profiles provides additional energy efficiency in comparison to products which rest right on the roof deck.

More detailed test results can be obtained from Classic Metal Roofing Systems.