

Staycell ONE STEP™ 255 Insulated Metal Roofing or Siding

R-Values	Non-insulated Metal Roofing or Siding	Metal Roofing or Siding with 1" thick Staycell ONE STEP™ 255
Outside air film	.2	.2
Metal roofing or siding	0	0
ONE STEP™ insulation	0	5.5
Inside air film	.7	.7
Total	.9 R	6.4 R
U factor = 1/R:	1.111	.1563

Annual Heating Loads

	Existing Non-insulated Metal Roofing or Siding	Metal Roofing or Siding with 1" thick Staycell ONE STEP™ 255
Formula	$\frac{1.111 \times 24 \times 6201^*}{.75} = 220,458 \text{ BTUs / sq.ft.}$	$\frac{.1563 \times 24 \times 6201^*}{.75} = 31,015 \text{ BTUs / sq. ft.}$
For 10,000 square feet of wall	2,204,580,000 BTUs	310,150,000 BTUs 86% reduction
Annual cost of natural gas**	\$22,045	\$3,102
\$18,943 (86%) annual savings		
<p>These calculations do not consider the reduction in air infiltration provided by the seamless Staycell ONE STEP™ 255 that can increase natural gas savings up to an additional 30%.</p>		

Payback Period

10,000 square feet of foam insulation @ \$1.50 per square foot = \$15,000 investment
\$18,943 annual gas savings = < 1 year payback period

*Formula: Annual heating load in BTUs per square foot of wall =

$\frac{\text{Heat loss (U Factor)} \times 24 \text{ hours} \times \text{Heating degree days (Cleveland, Ohio has 6,201 Heating Degree Days)}}{.75 \text{ (natural gas furnace efficiency)}}$

**Natural gas cost @ \$10.00 per 1,000 cubic feet (1,000,000 BTUs)

Disclaimer: This information is for illustration purposes only. Contact PSI for more information.

Staycell ONE STEP™ 255 Insulated Metal Roofing or Siding

R-Values	Non-insulated Metal Roofing or Siding	Metal Roofing or Siding with 2" thick Staycell ONE STEP™ 255
Outside air film	.2	.2
Metal roofing or siding	0	0
ONE STEP™ insulation	0	11
Inside air film	.7	.7
Total	.9 R	11.9 R
U = 1/R:	1.111	.084

Annual Heating Loads

	Existing Non-insulated Metal Roofing or Siding	Metal Roofing or Siding with 2" Thick Staycell ONE STEP™ 255
Formula	$\frac{1.111 \times 24 \times 6201^*}{.75} = 220,458 \text{ BTUs / sq.ft.}$	$\frac{.084 \times 24 \times 6201^*}{.75} = 16,668 \text{ BTUs / sq. ft.}$
For 10,000 square feet of wall	2,204,580,000 BTUs	166,682,880 BTUs 92% reduction
Annual cost of natural gas**	\$22,045	\$1,667
\$20,378 (92%) annual savings		
<p>These calculations do not consider the reduction in air infiltration provided by the seamless Staycell ONE STEP™ 255 that can increase natural gas savings up to an additional 30%.</p>		

Payback Period

10,000 square feet of foam insulation @ \$2.75 per square foot = \$27,500 investment
\$20,378 natural gas annual cost savings = 1.3 year payback period

* Formula: Annual heating load in BTUs per square foot of wall =

$\frac{\text{Heat loss (U Factor) x 24 hours x Heating degree days}}{.75}$ (Cleveland, Ohio has 6,201 Heating Degree Days)
 (natural gas furnace efficiency)

** Natural gas cost @ \$10.00 per 1,000 cubic feet (1,000,000 BTUs)

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