

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION RC-374

Effective Date: May 1, 2013

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **May 2017**.*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

### **24 Gauge LT-175 Metal Roofing Panels Over Wood Deck** manufactured by

**Northwest Roof Tile & Metal LLC**  
**6846 Theall Road**  
**Suite 400**  
**Houston, Texas 77066**  
**Telephone: (281) 893-8382**

will be accepted for use in areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

The LT-175 metal roofing panel is minimum 24 gauge galvalume steel panels with an optional paint finish. The metal roofing panels have a maximum coverage of 18". The panel has a 1  $\frac{3}{4}$ " snap lock standing seam rib. The metal roofing panels conform to ASTM A792, AZ 55, Grade 50, with a 50,000 psi yield point with optional paint finishes. The metal roofing panels must be formed within the panel rollformer specifications and tolerances.

Panel Rollformer: Schleich Quadro-Plus Rollformer  
Metalforming, Inc.  
100 International Drive  
Peachtree City, Georgia 30269

## LIMITATIONS

**Roof Decking:** The metal roofing panels shall be installed over minimum  $1\frac{9}{32}$ " thick wood structural panel decking.

**New Roof Deck Attachment:** The roof decking shall meet or exceed the uplift requirements of the International Residential Code or International Building Code and shall be installed as required for resistance to lateral wind loads.

**Design Wind Pressures:** The design pressure uplift load resistance shall be as specified in Table 1.

**Roof Slope:** The metal roofing panels may be installed on roofs with a roof slope as low as 3:12.

**Table 1**  
Attachment of minimum 24 gauge LT-175 metal roofing panels  
to minimum  $\frac{19}{32}$ " thick wood structural panel decking

Design Wind Pressure (psf)	Panel Seam	Purlin Spacing	Panel Clip	Clip Spacing	Clip Fastener
-52.5	Snap Lock	2'-6" o.c.	18 gauge fixed	36" o.c.	(2) #10

**Installation Over an Existing Roof Covering:** Installation over an existing roof covering is limited to a maximum of one existing layer of composition shingles, wood shingles or shakes, built-up roofing, or roll roofing applied over an existing, solid roof deck of minimum  $\frac{15}{32}$  inch plywood. Note: Inspection of the existing roof deck must be made prior to the installation of the roof panels. The condition of the existing roof deck must be acceptable to receive the roof panels before the roof panel installation proceeds. NOTE: Underlayment is not required to be installed.

### INSTALLATION INSTRUCTIONS

**General:** The metal roofing panels shall be installed in accordance with the manufacturer's recommended installation instructions and this evaluation report.

**Panels:** The metal roofing panels shall be secured to the roof deck as specified in Table 1 and in accordance with this section.

**Underlayment:** For installations over a solid deck, a minimum of one layer of No. 30 (Type II) asphalt felt or equivalent shall be used. The underlayment used shall comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The underlayment shall be installed in accordance with the requirements in the International Residential Code and International Building Code. The underlayment shall be applied with corrosion-resistant fasteners in accordance with the manufacturer's installation instructions. Fasteners shall be applied along the overlaps not farther apart than 36 inches on center.

**Attachment of Metal Roof Panels to Roof Deck:** The metal roof panels shall be secured to the roof deck as follows:

**Roof Panels to Wood Structural Deck:** The panels shall be installed using a minimum 18 gauge,  $3\frac{1}{2}$ " long, fixed clip with No. 10-12 x 1" long Pancake Type A. The fasteners shall be long enough to ensure a minimum penetration of  $\frac{1}{4}$ " below the roof deck. (Note: If the metal roofing panels are installed over an existing roof covering, then the fastener length shall be increased so that the fasteners are long enough to ensure a minimum penetration of  $\frac{1}{4}$ " below the existing plywood roof decking.) The required size and quantity of fasteners as well as the maximum allowable spacing of the fasteners is specified in Table 1. The butt and side joints of the panels shall be sealed with one part urethane caulk.

**Trims, Closures and Accessories:** Components such as the eave trim, rake trim, ridge trim, hip trim and valley trim shall be installed in accordance with the manufacturer's installation instructions.

**Alternative Fasteners:** Substitution of equivalent fasteners shall meet the following requirements:

No 10-12 x 1" Type A Pancake head, manufactured by Construction Fasteners, Inc.  
Ultimate withdrawal (pullout)  $\geq$  521 lbs in  $\frac{19}{32}$ " plywood.

**Note:** The manufacturer's installation instructions shall be available on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.