

# ICC-ES Evaluation Report


ESR-3610

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<p><b>DIVISION: 06 00 00—</b> <b>WOOD, PLASTICS, AND COMPOSITES</b></p> <p><b>Section: 06 05 23.13—</b> <b>Nails</b></p>	<p><b>REPORT HOLDER:</b> <b>FASTENING CARE</b></p> <p><b>ADDITIONAL LISTEES:</b> <b>ACTIVE SALES CO.</b></p> <p><b>STEELHEAD FASTENERS</b></p>	<p><b>EVALUATION SUBJECT:</b> <b>FASTENING CARE</b> <b>(MPROVE) STEEL NAILS</b></p>	
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## 1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2015 and 2012 [International Building Code® \(IBC\)](#)
- 2015 and 2012 [International Residential Code® \(IRC\)](#)

Property evaluated:

- Bending yield strength
- Material requirements and tolerances
- Corrosion

## 2.0 USES

The nails are used in engineered or prescriptive connections.

## 3.0 DESCRIPTION

The nails are formed from carbon steel wire; have full round heads (see [Figure 1](#)); have either smooth, screw, or ring shanks; and have either a bright finish with a vinyl (polymer) coating over a portion of the shank (non-galvanized) or a hot-dipped galvanized (HDG) coating. The HDG coating complies with ASTM A153, Class D, and the requirements ASTM F1667 Section 10.1.

## 4.0 DESIGN AND INSTALLATION

### 4.1 Design:

The nails described in this report are used in engineered connections designed in accordance with the ANSI/AWC National Design Specification (NDS) for Wood Construction using the bending yield strengths ( $F_{yb}$ ) provided in [Table 1](#).

Select nails, noted in [Table 1](#), are used in the prescriptive designs described in the IBC, IRC, NDS, and the AWC Special Design Provisions for Wind and Seismic (SDPWS), where compliance with ASTM F1667, NDS Table L4, and SDPWS Table A1 is required.

#### 4.2 Installation:

The nails must be installed in accordance with this report, the report holder's published installation instructions, the approved plans, the applicable code (IBC or IRC), and the applicable design specification (NDS or SDPWS).

The nails may be used with power tools recommended by the report holder.

HDG nails may be installed in chemically treated wood, such as pressure-, preservative-, or fire-retardant-treated wood, or in exterior or exposed conditions in accordance with 2015 IBC Section 2304.10.5 (2012 IBC Section 2304.9.5) and IRC Section R317.3.

### 5.0 CONDITIONS OF USE:

The nails described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The nails must be installed in accordance with this report; the report holder's published installation instructions; the approved plans, if applicable; and the applicable provisions of the code. In the case of a conflict amongst these documents, the most restrictive requirements govern.
- 5.2 Use of the BRT nails, which have a non-galvanized finish, in chemically treated wood, such as pressure-, preservative-, or fire-retardant-treated wood, or in exterior or exposed conditions, is not permitted.
- 5.3 The nails are manufactured under a quality control program with inspections by ICC-ES.

### 6.0 EVIDENCE SUBMITTED

Data in accordance with the [ICC-ES Acceptance Criteria for Nails \(AC116\)](#), dated October 2017.

### 7.0 IDENTIFICATION

Nails are packaged in containers or cartons bearing the report holder's name (Fastening Care) and its product brand (MProve) or one of the listee names (Active Sales or Steelhead Fasteners) and their product brand (Western Super X or Steelhead Fasteners, respectively), the evaluation report number (ESR-3610), and the nail description [shank type, length and diameter, and hardened (if applicable)]. Coated nails are identified on the nail carton or other packaging material by the designation "HDG (Hot Dipped Galvanized)".

- 7.1 The report holder's contact information is the following:

**FASTENING CARE**  
**5681 BEACH BOULEVARD, SUITE 100**  
**BUENA PARK, CALIFORNIA 90621**  
**(562) 923-4300**  
[www.fasteningcare.com](http://www.fasteningcare.com)

- 7.2 The additional listees' contact information is the following:

**ACTIVE SALES CO., INC.**  
**8743 SORENSEN AVENUE**  
**SANTA FE SPRINGS, CALIFORNIA 90670**  
**(800) 937-2255**  
[www.activesalesco.com](http://www.activesalesco.com)

**STEELHEAD FASTENERS**  
**18565 142<sup>ND</sup> AVENUE NORTHEAST**  
**WOODINVILLE, WASHINGTON 98072**  
**(866) 794-3543**  
[www.steelheadfasteners.com](http://www.steelheadfasteners.com)

TABLE 1—NAILS WITH SMOOTH, RING, OR SCREW SHANKS

NOMINAL SHANK DIAMETER (inch)	NOMINAL HEAD DIAMETER (inch)	LENGTHS (inch)	FINISH/ COATING <sup>1</sup>	PACKAGING	FOR USE WITH THE NDS BENDING YIELD STRENGTH, $F_{yb}$ (psi) <sup>2</sup>	FOR USE WITH THE PRESCRIPTIVE REQUIREMENTS OF THE IBC, IRC, NDS AND SPDWS <sup>3</sup> CLASSIFICATION PER ASTM F1667
<b>Full Round Head</b>						
0.113	0.275	2 to 2½	BRT & HDG	Wire Coil, Plastic Strip, Paper Tape, Bulk	100,000	6d common (2" x 0.113")
0.120	0.275	2 to 3½	BRT & HDG	Wire Coil, Plastic Strip, Paper Tape, Bulk	100,000	-
0.131	0.280	2¾ to 4	BRT & HDG	Wire Coil, Plastic Strip, Paper Tape, Bulk	100,000	8d common (2½" x 0.131")
0.148	0.285	1½ to 5⅞	BRT & HDG	Wire Coil, Plastic Strip, Paper Tape, Bulk	90,000	-
0.162	0.290	2½ to 6¼	BRT & HDG	Wire Coil, Plastic Strip, Paper Tape, Bulk	90,000	-
<b>Full Round Head (Hardened)</b>						
0.131	0.282	1 ½ & 2½	BRT & HDG	Plastic Strip, Paper Tape, Bulk	130,000	8d common (2½" x 0.131")
0.148	0.282	1½ & 2½	BRT & HDG	Plastic Strip, Paper Tape, Bulk	115,000	-
0.162	0.282	2½	BRT & HDG	Plastic Strip, Paper Tape, Bulk	115,000	-
<b>Offset Head</b>						
0.113	0.255	2 to 3¼	BRT & HDG	Paper Tape	100,000	-
0.120	0.255	2 to 3½	BRT & HDG	Paper Tape	100,000	-
0.131	0.255	2¾ to 4	BRT & HDG	Paper Tape	100,000	-
<b>Clipped Head</b>						
0.113	0.270/0.195 <sup>4</sup>	2 to 3¼	BRT & HDG	Paper Tape	100,000	-
0.120	0.275/0.197	2 to 3½	BRT & HDG	Paper Tape	100,000	-
0.131	0.275/0.197	2¾ to 4	BRT & HDG	Paper Tape	100,000	-

For **SI**: 1 inch = 25.4 mm, 1 psi = 6.89 kPa,

<sup>1</sup>Finish/Coating: BRT (non-galvanized), HDG (Hot dipped galvanized)

<sup>2</sup>The  $F_{yb}$  values comply with IBC Section 2303.6.

<sup>3</sup>Nail sizes listed comply with ASTM F1667 Table 15, NDS Table L4, and SDPWS Table A1 for common nails and may be used to meet the prescriptive requirements of the IBC, IRC, NDS, and SDPWS, as applicable. The nails must have the same length as the prescriptive requirements.

<sup>4</sup>The first number is Head 1 and the second number is Head 2 as shown in [Figure 1](#).

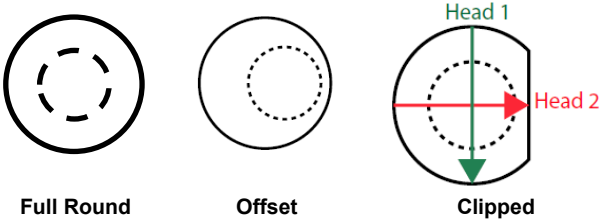


FIGURE 1—NAIL HEAD STYLES

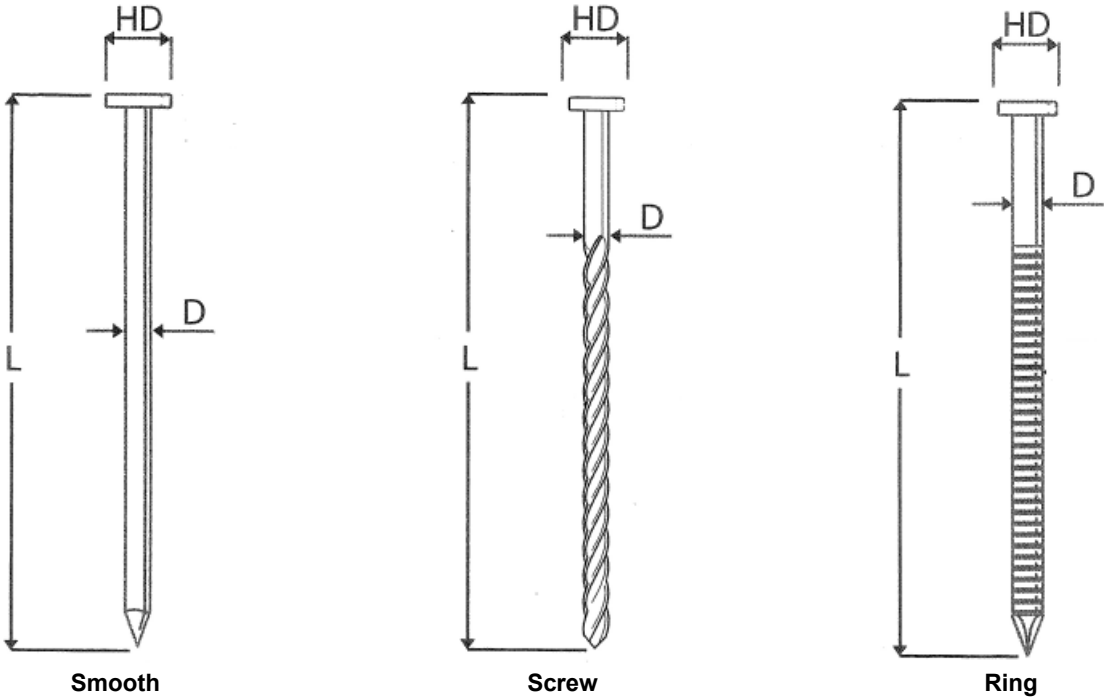


FIGURE 2—SHANK STYLES