

ESR-3507

Reissued March 2024 This report also contains:

- CHI Supplement

Subject to renewal March 2026 - LABC Supplement

- CBC Supplement
- FBC Supplement

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DIVISION: 06 00 00— WOOD, PLASTICS AND

COMPOSITES

Section: 06 05 23.13-

Nails

REPORT HOLDER: ASTROTECH STEELS PRIVATE LIMITED

ADDITIONAL LISTEES:

ACCENT BUILDING

MATERIALS

(Brand: Accent Striker)

KOKI HOLDINGS AMERICA LTD. (Brand: Metabo HPT

PEACE INDUSTRIES DBA SPOTNAILS (Brand: Spot Nails)

PRIME SOURCE

BUILDING PRODUCTS,

INC.

(Brand: Griprite)

SOUTHERN CARLSON,

INC.

(Brand: Interchange)
WOODGRAIN/DBA

HUTTIG BUILDING

PRODUCTS

(Brand: Huttig - Grip)

EVALUATION SUBJECT: ASTROTECH OR ASTROMACH NAILS



1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2021, 2018, 2015, 2012 and 2009 <u>International Building Code[®] (IBC)</u>
- 2021, 2018, 2015, 2012 and 2009 *International Residential Code*® (IRC)
- 2013 Abu Dhabi International Building Code (ADIBC)†

[†]The ADIBC is based on the 2009 IBC. 2009 IBC code sections referenced in this report are the same sections in the ADIBC.

For evaluation for compliance with codes adopted by <u>Los Angeles Department of Building and Safety (LADBS)</u>, see ESR-3507 LABC and LARC Supplement.

Properties evaluated:

- Bending yield strength
- Compliance with material requirements and tolerances of ASTM F1667.
- Compliance with prescriptive requirements of the IBC and IRC.
- Use in diaphragms and shear walls

2.0 USES

The nails described in this report are used for engineered and prescriptive structural connections between wood members. Hardened nails are intended for use in connections of metal connectors (side plates) to wood.

3.0 DESCRIPTION

The nails have full round heads, offset heads or clipped heads and diamond points. The nails are formed from carbon steel wire, hardened carbon steel wire, or stainless steel wire. Nails formed from carbon steel and hardened carbon steel are available with a bright finish (nongalvanized), an electro-galvanized coating or a hot-dip galvanized coating. Electro-galvanized nails comply with ASTM A641, Class 1. Hot-dip galvanized nails comply with ASTM A153, Class D. Both electro-galvanized and hot-dip galvanized nails comply with the requirements of Section 10.1 of ASTM F1667. Stainless steel nails are uncoated. See Table 1 for nail sizes, head styles, shank types, finishes, bending yield strength and packaging information. Dimensional tolerances conform to ASTM F1667.

4.0 DESIGN AND INSTALLATION

4.1 Design:

4.1.1 Engineered Structural Connections:

- **4.1.1.1 Lateral Design:** The nails described in <u>Table 1</u>, with a nominal diameter of 0.099 inch or larger (2.51 mm) comply with the requirements of IBC Section 2303.6 and may be used in lateral connections designed in accordance with the ANSI/AWC National Design Specification (NDS), using the bending yield strengths and nail diameters shown in <u>Table 1</u>, as applicable. Convert lateral design values determined in accordance with the NDS from lbf to N by multiplying by 4.45. The reference lateral design values for nails with a nominal diameter of 0.092 inch (2.33 mm) or less have been determined through testing, and are noted in Table 2.
- **4.1.1.2 Withdrawal Design:** The reference withdrawal design values for nails with a nominal diameter of 0.092 inch (2.33 mm) or less have been determined through testing, and are noted in <u>Table 2</u>.

The reference withdrawal design values for bright or galvanized carbon steel nails with a nominal diameter of 0.099 inch (2.51 mm) or larger must be determined in accordance with the NDS.

For stainless steel nails with a nominal diameter of 0.099 inch (2.51 mm) or larger, the reference withdrawal design value must be determined in accordance with the 2018 NDS for all editions of the IBC.

Convert withdrawal design values determined in accordance with the NDS from lbf/inch to N/mm by multiplying by 0.175.

- **4.1.1.3 Pull-through Design:** For the full round head nails described in <u>Table 1</u> and within the range of fastener head diameters and side member thicknesses specified in Table 12.2F of the 2018 NDS, the reference head pull-through design values must be determined in accordance with Section 12.2.5 of the 2018 NDS. Reference head pull-through design values for other nails and conditions are outside the scope of this report.
- **4.1.2** Engineered Diaphragms and Shear Walls: The nails listed in <u>Table 3</u> comply with the requirements of IBC Section 2303.6 and head area requirements defined in the ICC-ES Acceptance Criteria for Nails (AC116) and are equivalent to the code-prescribed nails listed in <u>Table 3</u> for use in engineered diaphragms and shear walls designed in accordance with the AWC Special Design Provisions for Wind and Seismic (SDPWS) which is referenced in the IBC.
- **4.1.3 Prescriptive Framing Connections:** The bright or galvanized carbon steel nails described in <u>Table 1</u>, with a nominal diameter of 0.099 inch or larger (2.51 mm) comply with the requirements of IBC Section 2303.6 and may be used in framing connections where the nail type and size is prescribed in IBC Table 2304.10.2 (2018 and 2015 IBC Table 2304.10.1; 2012 and 2009 IBC Table 2304.9.1) or IRC Table R602.3(1), as applicable.

- **4.1.4 Prescriptive Attachment of Sheathing:** The nails listed in <u>Table 3</u> comply with the requirements of IBC Section 2303.6 and head area requirements defined in AC116, and are equivalent to the code-prescribed nails listed in <u>Table 3</u> for attachment of sheathing to wood framing in accordance with IBC Table 2304.10.2 (2018 and 2015 IBC Table 2304.10.1; 2012 and 2009 IBC Table 2304.9.1) or IRC Tables R602.3(1) and R602.3(3), as applicable.
- **4.1.5** Prescriptive Use with Metal Connectors: The nails described in <u>Table 1</u> may be used where nails of the same material and dimension and the same or lesser bending yield strength are prescribed in an ICC-ES evaluation report on the metal connector.

4.2 Installation:

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 prescriptions in the code.

The nails described in this report are packaged for use in power tools recommended by the report holder. Individual nails may be manually driven.

Edge distances, end distances, and spacing must be sufficient to prevent splitting of the wood. Installation must be in accordance with the applicable requirements of NDS Section 12.1.6 (2012 NDS Section 11.1.6 for the 2012 IBC and IRC, 2005 NDS Section 11.1.5 for the 2009 IBC and IRC).

Hot-dip galvanized nails and stainless steel nails may be used in preservative-treated and fire-retardant-treated wood in accordance with IBC Section 2304.10.6 (2018 and 2015 IBC Section 2304.10.5; 2012 and 2009 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 carbon steel and hardened carbon steel nails with a bright finish in chemically treated wood, such as pressure-, preservative-, or fire-retardant-treated wood, or in exterior or exposed conditions, is not permitted. Use of the carbon steel and hardened carbon steel electro-galvanized nails in chemically treated wood or in exterior or exposed conditions is outside the scope of this report.
- 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 March 2018 (editorially revised July 2022).

7.0 IDENTIFICATION

- **7.1** The ICC-ES mark of conformity, electronic labeling, or the evaluation report number (ICC-ES ESR-3507) along with the name, registered trademark, or registered logo of the report holder or listee must be included in the product label.
- **7.2** In addition, packages of nails are identified by the brand name and the nail description (shank type, diameter, length and finish/coating; the word "hardened" for hardened nails).
- **7.3** The report holder's contact information is the following:

ASTROTECH STEELS PRIVATE LIMITED
1335 CANNON ROAD, SECTOR 36, SRI CITY SEZ
SATYAVEDU MANDAL, TIRUPATI DISTRICT
ANDHRA PRADESH 517588
INDIA
+91 44 43009061
www.astrotechsteels.com

7.4 The additional listees' contact information is the following:

ACCENT BUILDING MATERIALS
10131 FM 2920
TOMBALL, TEXAS 77375
(281) 255-4881
(562) 926-6612
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1111 BROADWAY AVENUE
BRASELTON, GEORGIA 30517
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PEACE INDUSTRIES DBA SPOTNAILS 1100 HICKS ROAD ROLLING MEADOWS, ILLINOIS 60008 (847) 259-1620 www.spotnails.com customerservice@spotnails.com

PRIME SOURCE BUILDING PRODUCTS, INC. 1321 GREENWAY DRIVE IRVING, TEXAS 75038 (972) 999-8500 www.primesourcebp.com platinumsales@primesourcebp.com

SOUTHERN CARLSON, INC. 8990 F STREET OMAHA, NEBRASKA 68127 (800) 745-6735 www.southerncarlson.com customercare@southerncarlson.com

WOODGRAIN/DBA HUTTIG BUILDING PRODUCTS 300 NORTHWEST 16TH STREET FRUITLAND, IDAHO 83619 (800) 325-4466 www.huttig.com keikins@woodgrain.com

TABLE 1—NAILS SPECIFICATIONS

	TABLE 1—NAILS SPECIFICATIONS							
NOMINAL SHANK DIAMETER (inch)	RANGE OF LENGTHS (inches)	HEAD STYLE ¹	NOMINAL HEAD DIAMETER (inch)	SHANK TYPE ¹	FINISH/ COATINGS ²	SPECIFIED BENDING YIELD STRENGTH F_{yb} (psi)	PACKAGING	
0.083	1 - 2 ¹ / ₂	Full round	0.195	S, R, Sc	X, HD, EG, SS	See Footnote 3	Bulk, wire coil	
0.086	1 - 2 ¹ / ₂	Full round	0.195	S, R, Sc	X, HD, EG, SS	See Footnote 3	Bulk, wire coil	
0.092	1 - 21/2	Full round	0.216	S, R, Sc	X, HD, EG, SS	See Footnote 3	Bulk, wire coil	
0.099	11/8 - 21/2	Full round	0.238	S, R, Sc	X, HD, EG, SS	100,000	Bulk, wire coil	
0.099	11/8 - 21/2	Full round	0.238	S, R, Sc	HX, HHD, HEG	130,000	Bulk, wire coil	
0.113	1 ¹ / ₄ - 3	Full round	0.277	S, R, Sc	X, HD, EG, SS	100,000	Bulk, plastic strip, wire coil	
0.113	1 ¹ / ₄ - 3	Full round	0.277	S, R, Sc	HX, HHD, HEG	130,000	Bulk, plastic strip, wire coil	
0.113	2 - 21/2	Clipped	0.269	S, R, Sc	X, HD, EG, SS	100,000	Paper tape, wire weld strip	
0.113	2 - 21/2	Clipped	0.269	S, R, Sc	HX, HHD, HEG	130,000	Paper tape, wire weld strip	
0.113	2 - 31/2	Offset	0.258	S, R, Sc	X, HD, EG, SS	100,000	Paper tape, wire weld strip	
0.113	2 - 31/2	Offset	0.258	S, R, Sc	HX, HHD, HEG	130,000	Paper tape, wire weld strip	
0.120	21/4 - 4	Full round	0.277	S, R, Sc	X, HD, EG, SS	100,000	Bulk, plastic strip, wire coil	
0.120	2 ¹ / ₄ - 4	Full round	0.277	S, R, Sc	HX, HHD, HEG	130,000	Bulk, plastic strip, wire coil	
0.120	2 ³ / ₄ - 3 ¹ / ₂	Clipped	0.277	S, R, Sc	X, HD, EG, SS	100,000	Paper tape, wire weld strip	
0.120	23/4 - 31/2	Clipped	0.277	S, R, Sc	HX, HHD, HEG	130,000	Paper tape, wire weld strip	
0.120	2 - 31/2	Offset	0.258	S, R, Sc	X, HD, EG, SS	100,000	Paper tape, wire weld strip	
0.120	2 - 31/2	Offset	0.258	S, R, Sc	HX, HHD, HEG	130,000	Paper tape, wire weld strip	
0.131	1 ¹ / ₂ - 4	Full round	0.280	S, R, Sc	X, HD, EG, SS	100,000	Bulk	
0.131	1 ¹ / ₂ - 4	Full round	0.280	S, R, Sc	HX, HHD, HEG	130,000	Bulk	
0.131	1 ¹ / ₂ - 4	Full round	0.277	S, R, Sc	X, HD, EG, SS	100,000	Plastic strip, wire coil	
0.131	1 ¹ / ₂ - 4	Full round	0.277	S, R, Sc	HX, HHD, HEG	130,000	Plastic strip, wire coil	
0.131	11/2 - 21/2	Full round	0.287	S, R, Sc	X, HD, EG, SS	100,000	Paper tape 35 degree	
0.131	11/2 - 21/2	Full round	0.287	S, R, Sc	HX, HHD, HEG	130,000	Paper tape 35 degree	
0.131	3 - 3 ¹ / ₂	Clipped	0.277	S, R, Sc	X, HD, EG, SS	100,000	Paper tape, wire weld strip	
0.131	3 - 31/2	Clipped	0.277	S, R, Sc	HX, HHD, HEG	130,000	Paper tape, wire weld strip	
0.131	2 - 3 ¹ / ₂	Offset	0.260	S, R, Sc	X, HD, EG, SS	100,000	Paper tape, wire weld strip	
0.131	2 - 3 ¹ / ₂	Offset	0.260	S, R, Sc	HX, HHD, HEG	130,000	Paper tape, wire weld strip	
0.135	1 ¹ / ₂ - 4	Full round	0.279	S, R, Sc	X, HD, EG	100,000	Bulk, plastic strip, wire coil	
0.148	1 ¹ / ₂ - 6	Full round	0.307	S, R, Sc	X, HD, EG, SS	90,000	Bulk, plastic strip, wire coil	
0.148	1 ¹ / ₂ - 6	Full round	0.307	S, R, Sc	HX, HHD, HEG	115,000	Bulk, plastic strip, wire coil	
0.148	11/2 - 21/2	Full round	0.307	S, R, Sc	X, HD, EG, SS	90,000	Paper tape 35 degree	
0.148	11/2 - 21/2	Full round	0.307	S, R, Sc	HX, HHD, HEG	115,000	Paper tape 35 degree	
0.162	1 ¹ / ₂ - 6	Full round	0.332	S, R, Sc	X, HD, EG, SS	90,000	Bulk, plastic strip, wire coil	
0.162	11/2 - 6	Full round	0.332	S, R, Sc	HX, HHD, HEG	115,000	Bulk, plastic strip, wire coil	
0.162	11/2 - 21/2	Full round	0.332	S, R, Sc	X, HD, EG, SS	90,000	Paper tape 35 degree	
0.162	11/2 - 21/2	Full round	0.332	S, R, Sc	HX, HHD, HEG	115,000	Paper tape 35 degree	

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

¹See Figure 1 for a description of the head styles. Shank styles: S = smooth; R = ring; Sc = screw. ²Finish/coatings: X = Bright (no zinc) carbon steel, EG = Electro-galvanized carbon steel, HD = Hot dipped galvanized carbon steel, HX = Hardened carbon steel nails with no coating, HEG = Hardened carbon steel nails with electro-galvanized coating; HHD = Hardened carbon steel nails with hot dip galvanized coating; SS = Stainless steel nails.

³Specified bending yield strengths are described in the manufacturer's approved quality documentation. The reference design values for these nails are not to be calculated in accordance with the NDS. See Table 2 for reference design values based on testing.

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TABLE 2—REFERENCE DESIGN VALUES FOR NAILS WITH SHANK DIAMETERS LESS THAN 0.099 INCH1,2

		NOMINAL HEAD DIA. (in.)	FINISH/ COATINGS ³	LATERAL CAPACITY⁴				WITHDRAWAL CAPACITY ^{5,6}		
SHANK LENG	NOMINAL LENGTH (in.)			Side Member Thick. (in.)	Minimum Main Member Thick. (in.)	Min. Assigned Specific Gravity	Reference Design Value (lbf)	Min. Assigned Specific Gravity	Min. Embedment (in.)	Reference Design Value (lbf/in)
0.083	21/2	0.195	X, HD, EG SS	²⁵ / ₃₂	2	0.40	39	0.40	11/4	6
0.086	21/2	0.195	X, HD, EG SS	²⁵ / ₃₂	2	0.40	46	0.40	1 ¹ / ₄	9
0.092	21/2	0.216	X, HD, EG	²⁵ / ₃₂	2	0.40	46	0.40	11/4	10

For **SI:** 1 inch = 25.4 mm, 1 lbf = 4.448 N.

²Values apply to nail shank types of smooth shank, ring shank and screw shank.

TABLE 3—NAILS FOR USE IN ENGINEERED DIAPHRAGMS AND SHEAR WALLS AND PRESCRIPTIVE SHEATHING ATTACHMENT

NAIL TYPE AND SIZE PRESCRIBED IN THE CODE	NAIL DESCRIPTION		
6d common (2" x 0.113")	2 to 2 ³ / ₈ " x 0.113"; full round head; smooth; X, HD, EG, HX, HHD or HEG Nominal head diameter is 0.277 inches		
8d common (2 ¹ / ₂ " x 0.131")	2 ¹ / ₂ " to 3" x 0.131"; full round head; smooth; X, HD, EG, HX, HHD or HEG Nominal head diameter is 0.280 or 0.287 inches		
10d common (3" x 0.148")	3" to 3 ¹ / ₂ " x 0.148"; full round head; smooth; X, HD, EG, HX, HHD or HEG Nominal head diameter is 0.307 inches		

For **SI:** 1 inch = 25.4 mm.



Full Round



Clipped



Offset

FIGURE 1—NAIL HEAD STYLES

¹Reference design values are average ultimate loads divided by a safety factor, in accordance with testing requirements of AC116, which must be adjusted in accordance with Section 11.3 of the NDS (Section 10.3 of the 2012 and 2005 NDS for the 2012 and 2009 IBC, respectively).

³Finish/coatings: X = Bright (no zinc) carbon steel, EG = Electro-galvanized carbon steel, HD = Hot dipped galvanized carbon steel, SS = Stainless steel nails.

⁴Reference lateral load values are based on main and side members moisture content between 10 and 14 percent and main and side members minimum specific gravity of 0.40.

⁵Reference withdrawal load values are based on the following: member moisture content between 10 and 14 percent, nail end distance = 1.5 inches, and nail edge distance = 0.75 inch.

⁶Tabulated withdrawal reference design values are in pounds per inch of nail penetration into side grain of wood member.



ESR-3507 Chicago Title 14 Supplement

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This report is subject to renewal March 2026.

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A Subsidiary of the International Code Council®

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

Section: 06 05 23.13-Nails

REPORT HOLDER:

ASTROTECH STEELS PRIVATE LIMITED

EVALUATION SUBJECT:

ASTROTECH OR ASTROMACH NAILS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the nails, described in ICC-ES evaluation report <u>ESR-3507</u>, have also been evaluated for compliance with the Chicago Construction Codes (Title 14 of the Chicago Municipal Code) as noted below.

Applicable code editions:

■ 2019 Chicago Building Code (Title 14B)

2.0 CONCLUSIONS

The nails, described in Sections 2.0 through 7.0 of the evaluation report <u>ESR-3507</u>, comply with Title 14B, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The nails described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report <u>ESR-3507</u>.
- The design, installation, conditions of use and identification of the nails are in accordance with the 2018 International Building Code[®] (IBC) provisions noted in the evaluation report <u>ESR-3507</u>.
- The design, installation and inspection are in accordance with additional requirements of Chapters 16, 17 and 23 of Title 14B, as applicable.





ESR-3507 LABC and LARC Supplement

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DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

Section: 06 05 23.13-Nails

REPORT HOLDER:

ASTROTECH STEELS PRIVATE LIMITED

EVALUATION SUBJECT:

ASTROTECH OR ASTROMACH NAILS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the nails, described in ICC-ES evaluation report <u>ESR-3507</u>, have also been evaluated for compliance with the codes noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

Applicable code editions:

- 2023 City of Los Angeles Building Code (LABC)
- 2023 City of Los Angeles Residential Code (LARC)

2.0 CONCLUSIONS

The nails, described in Sections 2.0 through 7.0 of the evaluation report <u>ESR-3507</u>, comply with the LABC Chapter 23, and the LARC, and are subject to the conditions of use described in this supplement.

3.0 CONDITIONS OF USE

The nails described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report <u>ESR-3507</u>.
- The design, installation, conditions of use and identification of the nails are in accordance with the 2021 International Building Code[®] (IBC) provisions noted in the evaluation report <u>ESR-3507</u>.
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16, 17 and 23, and LARC Chapters 5, 6 and 8, as applicable.
- Nails made from bright steel wire must not be used in exterior or exposed conditions.





ESR-3507 CBC and CRC Supplement

Reissued March 2024

This report is subject to renewal March 2026.

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A Subsidiary of the International Code Council®

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

Section: 06 05 23.13-Nails

REPORT HOLDER:

ASTROTECH STEELS PRIVATE LIMITED

EVALUATION SUBJECT:

ASTROTECH OR ASTROMACH NAILS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the nails, described in ICC-ES evaluation report ESR-3507, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

2022 California Building Code (CBC)

For evaluation of applicable Chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) AKA: California Department of Health Care Access and Information (HCAI) and the Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

2022 California Residential Code (CRC)

2.0 CONCLUSIONS

2.1 CBC:

The nails, described in Sections 2.0 through 7.0 of evaluation report ESR-3507, comply with CBC Chapter 23, provided the design and installation are in accordance with the 2021 International Building Code® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16, 17 and 23, as applicable.

- 2.1.1 OSHPD: The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.
- 2.1.2 DSA: The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

2.2 CRC:

The nails, described in Sections 2.0 through 7.0 of evaluation report ESR-3507, comply with CRC Chapters 5, 6, 7, 8 and 9, provided the design and installation are in accordance with the 2021 International Residential Code® (IRC) provisions noted in the evaluation report.





ESR-3507 FBC Supplement

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A Subsidiary of the International Code Council®

DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

Section: 06 05 23.13-Nails

REPORT HOLDER:

ASTROTECH STEELS PRIVATE LIMITED

EVALUATION SUBJECT:

ASTROTECH OR ASTROMACH NAILS

1.0 REPORT PURPOSE AND SCOPE

Purpose:

The purpose of this evaluation report supplement is to indicate that the nails, described in ICC-ES evaluation report ESR-3507, have also been evaluated for compliance with the codes noted below.

Applicable code editions:

- 2020 Florida Building Code—Building
- 2020 Florida Building Code—Residential

2.0 CONCLUSIONS

The nails, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-3507, comply with the *Florida Building Code—Building* and the *Florida Building Code—Residential*. The design requirements must be determined in accordance with the *Florida Building Code—Building* and the *Florida Building Code—Residential*, as applicable. The installation requirements noted in ICC-ES evaluation report ESR-3507 for the 2018 *International Building Code*® (IBC) meet the requirements of the *Florida Building Code—Building* and *Florida Building Code—Residential*, as applicable.

Use of the nails for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* and the *Florida Building Code—Residential* has not been evaluated, and is outside the scope of this evaluation report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

