

# Standard Terminology of Nails for Use with Wood and Wood-Base Materials<sup>1</sup>

This standard is issued under the fixed designation F547; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

#### INTRODUCTION

The terms included in these definitions are listed in alphabetical order under nine headings to facilitate quick reference and in certain cases are sub-categorized. They are intended to apply to metal nails. Omitted are terms relating to tacks, pins, drift pins, dowels, studs, spikes, staples, and other fasteners, such as nail plates. Also omitted are terms relating to the testing and the performance of nails, that is, their drivability, withdrawal resistance, lateral load transmission, creep, protrusion resistance, and splitting; and methods of use, such as face, toe, side, and end-nailing, spacing, loading conditions, etc. These subject matters will be covered in a separate definition of terms relating to mechanical fasteners.

Common acceptance and usage are the basis for most of the definitions listed. In some instances, this common usage results in more than one definition for a given term. In other cases, registered trademarks have become generic in nature; hence, they are included among the terms listed.

Any such listing cannot be complete. As additional terms are referred to the Society's attention, they will be included.

An asterisk (\*) behind the name of a nail indicates that this particular nail type is described in Specification F1667/F1667/M.

Whereas dimensions are normally not part of a definition, they are included in this standard because they are essential in fully describing the fastener under consideration. <u>Nail size designations are shown</u> as length x shank diameter (example  $3 \times 0.131$ ) All nail and wire dimensions referenced in this standard are in inches only. For SI dimension, reference F1667/F1667M where applicable.

https://staThe definitions are listed under the following headings: 8-4966-8a97-ba6115e17288/astm-1547-22

Nail

Nail Types used in Engineered and Non-Engineered Building Construction

Nail Types used in Specialized Applications Material Terminology

Nail Heads Termi

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Finish, Coating, and Galvanization Terms

2.2 Nail Types used in Engineered and Non-Engineered Building Construction

2.2.1 Framing Nails

2.1 Nail

- 2.2.2 Roofing (Shingles, Tile, Underlayment) Nails
- 2.2.3 Roof Sheathing, Wall Sheathing, Wall Siding Nails
- 2.2.4 Interior and Flooring Nails
- 2.2.5 Miscellaneous Construction Nails
- 2.3 Nail Types use in Specialized Applications

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∰ F547 – 22

2.4 Finish, Coating and Galvanization Terms 2.4.1 Finish and Coating Terms 2.4.2 Galvanization Terms 2.5Material Terminology2.6Nail Heads Terminology 2.7 Nail Points

2.8 Nail Shank Terminology 2.9 Miscellaneous Terms

### 🕼 F547 – 22

#### **1. Referenced Documents**

1.1 ASTM Standards:<sup>2</sup>

A510 Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel (Metric) A0510\_A0510M A700 Guide for Packaging, Marking, and Loading Methods for Steel Products for Shipment F1667 Specification for Driven Fasteners: Nails, Spikes, and Staples

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ASTM F547-22

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<sup>&</sup>lt;sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard's Document Summary page on the ASTM website.

### **<u>1. Referenced Documents</u>**

#### 1.1 ASTM Standards:<sup>2</sup>

A510/A510M Specification for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel, and Alloy Steel A1040 Guide for Specifying Harmonized Standard Grade Compositions for Wrought Carbon, Low-Alloy, and Alloy Steels A1059/A1059M Specification for Zinc Alloy Thermo-Diffusion Coatings (TDC) on Steel Fasteners, Hardware, and Other Products

F1667/F1667M Specification for Driven Fasteners: Nails, Spikes, and Staples

#### 2. Terminology

#### <u>2.1</u>NAIL

**nail**—straight, slender fastener, usually pointed and headed; normally 6 in. or less in length; designed to be driven; to hold two or more pieces together or to act as support. (See screw nail; drive screw.)

#### DISCUSSION-

In contrast to screw—fastener, usually pointed and headed; designed to be turned with a screwdriver or other device; having in its simplest form one or two continuous spiral threads (such as a wood screw thread) or a helical thread (such as a machine screw thread) or combinations thereof (such as a sheet-metal screw thread).

#### 2.2 NAIL TYPES USED IN ENGINEERED AND NON-ENGINEERED BUILDING CONSTRUCTION

# 2.2.1 FRAMING NAILS

**box nail\***—carbon steel bright, zinc coated or other coating as specified, stainless steel or aluminum, smooth or deformed shank 1  $\frac{by \times 0.058}{by 0.162 - in \times 0.162}$  nails, made of lighter-gage wire than common nails and sinkers, with flat  $\frac{11}{64}$  to  $\frac{13}{32 - in}$ . head and medium diamond point.

**cooler nail\***—carbon steel or stainless steel, round smooth or deformed shank, bright or zinc coated or other coating as specified 1  $\frac{by \times 0.120 - in \times 0.120}{by \times 0.120 - in \times 0.120}$  nails with flat  $\frac{11}{64}$  to  $\frac{19}{64 - in}$  head and medium diamond point, with head diameter same as or smaller than that of common wire nail of same length.

**metal hardware nail**\*—carbon steel- bright or zinc coated, or stainless steel, smooth or ring shank  $1\frac{1}{4} \frac{by \times}{D} 0.131$  to  $3\frac{1}{2} \frac{by}{D} 0.162 - in \times 0.162$  flat round head  $0.281 - in \times 0.281$ , diamond point meeting the minimum bending yield requirements of Supplementary section S1 and Table S1.1 and S1.2 of Specification F1667/F1667/M.

**post-frame ring shank nail**\*—carbon steel, hardened carbon steel or stainless steel, bright or zinc coated, ring shank nail, ranging from 3 by $\times$  0.135 in. to 8 by 0.207 in.,  $\times$  0.207, with specific dimensional values of ring geometry, flat head and diamond point, meeting minimum bending yield requirements of Supplementary Section S1 and Table S1.1 or Table S1.2 of Specification F1667/F1667/F1667M.

**power-tool driven common nail**\*—steel-bright, zinc coated or other coating as specified; stainless steel; aluminum, smooth or deformed shank, ranging from  $1\frac{1}{4}$  by  $\times 0.080$  to  $4\frac{1}{2}$  by 0.162-in.  $\times 0.162$  flat full, altered heads or T-head; head dimensions as specified in order to be driven by power-tool, diamond, chisel, needle or no point

sinker\*—steel-bright or coated as specified, smooth shank,  $1\frac{1}{8}$  by  $\times$  0.067 to  $5\frac{3}{4}$  by 0.244-in.  $\times$  0.244 nails with  $1\frac{1}{64}$  to  $1\frac{1}{2}$ -in. sinker head and medium diamond point, with diameter of head smaller than that of cooler and common nail of same designation.

**steel common nail**\*—steel-bright, zinc coated or other coating as specified, or stainless steel, smooth shank,  $1 \frac{by}{2} 0.072$  to 6 by 0.262-in: <u>x 0.262</u> nails with flat 11/64 to 17/32-in. head and medium diamond point. Diameter is larger than that for sinkers, coolers, corkers, and box nails of same length.

#### <u>2.2.2</u> ROOFING (SHINGLES, TILE, UNDERLAYEMENT)

aluminum common nail\*—smooth or square barbed shank, aluminum-alloy, 1 by  $\times$  0.099 to 4 by  $\times$  0.199 in. nails with flat  $\frac{5}{32}$  to 0.460 -in. head and medium diamond point

aluminum roofing nail\* —flat head 0.438-in: 0.438 diameter, round smooth or deformed shank  $\frac{3}{4}$  by  $\times$  0.120 to  $2\frac{1}{2}$  by  $\times$  0.145 with diamond point.

**cap-nail hand-driven roofing nail\***—steel-bright or zinc coated, stainless steel, diamond point, smooth or deformed shank  $\frac{1}{2}$  by  $\times$  0.105 to 8 by  $\times$  0.162 in. Caps 1-in.1.00 round metal or plastic, square 1-in.1.00 flat or domed. With metal caps both nail / cap bright or both galvanized. Nail- cap integral units at manufacturing

**cap-nail power-driven roofing nail\*** —steel-bright or zinc coated, stainless steel, diamond point, smooth or deformed shank  $1\frac{1}{4}$  by  $\times 0.080$  to 2 by  $\times 0.120$  in. Caps 1-in. 1.00 round or 1-in. 1.00 square metal or plastic. With metal caps both nail / cap bright or both galvanized. Nail-cap assembled at point of application.

**copper common nail\***—bright, solid-copper,  $\frac{5}{8}$  by  $\times 0.065$  to 6 by 0.284-in.  $\times 0.284$  nails with flat head and medium diamond point.

**copper-clad roofing nail\***—copper-clad wire, flat head 0.375-in.0.375 diameter, smooth shank 0.120-in.0.120 diameter 1 to  $2^{1/4}$ -in. long.

**purlin nail,**—galvanized, regular-stock-steel, aluminum-alloy or copper, 4 to 16 by  $\times$  <sup>1</sup>/<sub>8</sub>-in., 0.135 or 0.148-in.0.148 nails of desired length with flat <sup>11</sup>/<sub>32</sub>-in., curved or <sup>15</sup>/<sub>32</sub>-in. head, <sup>9</sup>/<sub>16</sub>-in. cast lead head or plastic washer and sheared-square or diamond point; for securing corrugated roofing to I-beams.

**roofing-tile nail**— galvanized, regular-stock-steel, 5 to 7 by 0.148-in.  $\times 0.148$  nails with flat  $\frac{5}{16}$ -in. head and medium diamond point.

shingle nail\*—(*Aluminum*) flat head 0.191 to  $\frac{0.312 \text{-in} 0.312}{0.312}$  diameter, diamond point, smooth or deformed shank 1<sup>1</sup>/<sub>4</sub> by  $\times$  0.101 to 1<sup>3</sup>/<sub>4</sub> by 0.113-in.  $\times$  0.113

(*Steel*) bright or zinc coated, flat head 0.205 to  $\frac{0.406 \text{-in} 0.406}{0.406}$  diameter, smooth or barbed shank 1<sup>1</sup>/<sub>4</sub> by × 0.092 to 2 by 0.113-in.× 0.113.

shake nail, cedar-shake or shingle nail, wood-shake face nail—hot dip galvanized steel or stainless steel, <u>plainsmooth</u> or ring shank,  $1\frac{1}{4}$  by  $\times 0.080$  to 2 by 0.092-in  $\times 0.092$  with flat 0.19-in 0.19 min head, diamond point

**slating nail\***—galvanized, regular-stock-steel, 1 by  $\times 0.106$  to 2 by 0.148-in:  $\times 0.148$  nails with slightly countersunk 5/16 to 7/16-in. flat head and medium diamond point. Also, aluminum-alloy, 1 by  $\times 0.106$  to 1  $\frac{1}{2}$  by 0.135-in:  $\times 0.135$  nails with large flat 5/16 to 3/8-in. head and medium diamond point. Also, solid copper, 7/8 by  $\times 0.109$  to 2 by 0.135-in:  $\times 0.135$  nails with large flat head and medium diamond point.

steel-reinforced head roofing nail\*—steel bright or zinc coated, flat reinforced head  $\frac{0.625 \text{-in.} 0.625}{0.625}$  diameter, smooth round shank <sup>3</sup>/<sub>4</sub> to 1<sup>1</sup>/<sub>4</sub>-in long and 0.106 and  $\frac{0.120 \text{-in} 0.120}{0.120}$  diameter.

**steel roofing nail**\*—steel bright or zinc coated, stainless steel nail, flat head 0.375 to  $\frac{0.500 - \text{in}0.500}{\text{b}0.100}$  diameter, round smooth or ring shank 0.106 to  $\frac{0.162 - \text{in}.0.162}{\text{b}0.120 - \text{in}}$  diameter  $\frac{\text{by} \times 3/4}{2}$  to 41/2 long, with diamond point. and 1  $\frac{1}{\text{b}0.120 - \text{in}} \times 0.120$  to 13/4  $\frac{1}{\text{b}0.135 - \text{in}} \times 0.135$  for stainless steel.

## ∰ F547 – 22

steel shingle nail\*—steel bright or zinc coated, flat head 0.250 to  $\frac{0.406 \text{-in} 0.406}{0.406}$  diameter, diamond point, with 1<sup>1</sup>/<sub>4</sub> by  $\times$  0.092 to 2 by  $\times$  0.113 smooth or ring round shank.

**umbrella head roofing nail\***—zinc coated steel, leak resistant umbrella head, diamond point, round smooth or deformed shanks  $1\frac{3}{4} \frac{\text{by } 0.135 - \text{in} \times 0.135}{\text{by} \times 0.135}$  to 3 by  $\times$  0.148.

**underlay nail, underlayment nail\***—bright, stiff-stock or hardened-steel, annularly threaded, 1 by 0.080 to 3 by 0.148-in.  $\times$  0.148 nails with flat or slightly countersunk  $\frac{3}{16}$  to  $\frac{5}{16}$ -in. head and medium diamond point.

washered aluminum roofing nail\*—0.438 diameter flat head with neoprene washer under head, diamond point, smooth or deformed shank  $1\frac{3}{4}$  by  $\times$  0.135 to  $2\frac{1}{2}$  by 0.145-in.  $\times$  0.145.

washered steel roofing nail\*—steel bright or zinc coated nail, 0.438 diameter flat head with elastomer washer under head, diamond point, smooth or ring shank  $1\frac{3}{4}$  by 0.135 to  $2\frac{1}{2}$  by 0.145-in 0.145

#### 2.2.3 ROOF SHEATHING, WALL SHEATHING, WALL SIDING NAILS

#### SheatingSheathing Nails

**diaphragm/sheathing nail**—bright, galvanized, hardened steel or stainless steel, smooth or deformed shank,  $2 \frac{by \times}{2} 0.113$  to  $3 \frac{by \times}{2} 0.148 \frac{-in}{2}$  with 0.266 to  $\frac{0.312-in}{0.312}$  diameter flat head and diamond point. Length dependent upon sheathing thickness and minimum penetration requirements.

**fiberboard nail**—bright or electroplated, regular-stock-steel or hardened-steel 1 by 0.054 to 2 by 0.062-in.  $\times$  0.062 nails with flat  $\frac{3}{32}$  or  $\frac{7}{64}$ -in. head and medium needle point.

**hardboard nail**—slender, usually colored (baked-lacquer finished), stiff-stock or usually hardened-steel, usually annularly threaded, 1 to  $1\frac{5}{8}$  by 0.058-in.× 0.058 nails with small flat head and long needle point for fastening plain or prefinished  $\frac{1}{8}$  and  $\frac{1}{4}$ -in. hardboard for interior applications. Also, slender bright or colored (baked-lacquer finished), galvanized, stiff-stock, or usually hardened-steel, usually helically threaded, 2 to 3 by× 0.105 and 0.120-in.0.120 nails with countersunk  $\frac{3}{16}$  or  $\frac{13}{64}$ -in. head and pilot needle point for fastening hardboard for exterior applications.

**roof sheathing ring shank nail\***—bright, galvanized or stainless steel ring shank nail, ranging from  $2\frac{3}{8}$  by  $\times$  0.113 in. to 3 by 0.131 in.,  $\times$  0.131, with specific dimensional values of ring geometry, flat head, diamond point, meeting minimum bending yield requirements of Supplementary Section S1 and Table S1.2 of Specification F1667F1667M.

**roof-deck nail**—galvanized, steel and bright steel, hardened steel, <u>plainsmooth</u> or annularly threaded, <u>threaded shank</u>, 3 by  $\times$  0.135 to 4<sup>1</sup>/<sub>2</sub> by 0.177-in.  $\times$  0.177 nails with flat or slightly countersunk  $\frac{9}{32}$  to  $\frac{25}{44-in}$  head and medium diamond point.

#### Siding Nails

**aluminum-siding nail**—plain-shank smooth shank or helically threaded, aluminum-alloy 1 by  $\times$  0.099 to  $\frac{2121/2}{2}$  /2 by 0.135-in.  $\times$  0.135 nails with flat 1/4 to 5/16-in. flat head and medium diamond point

**common siding nail**—bright or colored (baked-lacquer finished), galvanized, regular-stock-steel or hardened-steel, plain-shank smooth shank or threaded,  $1\frac{3}{4}$  by 0.080 to 3 by 0.128-in.  $\times$  0.128 nails with flat  $\frac{5}{32}$  to  $\frac{19}{4}$ -in. head and medium diamond point.

**insulated-siding nail**—bright or colored (bakedlacquer(baked-lacquer finished) aluminum-alloy,  $1\frac{1}{2}$  by 0.113 to  $2\frac{1}{2}$  by 0.135-in.<u>x</u> 0.135 nails with flat  $\frac{7}{32}$  to  $\frac{9}{32-in}$ . flat head and medium diamond point.



**wood-siding nail**— bright and colored (baked-lacquer finished), <u>plain-shank smooth shank</u> or helically threaded, aluminumalloy,  $1\% \frac{by}{2} 0.106$  to  $2\% \frac{by}{0.148-in} \times 0.148$  nails with %4 to 11/32-in. casing or 1%4 to 5/16-in. sinker head and medium or blunt diamond point. Also, bright or colored (baked-lacquer finished), <u>stainless-steel</u>, <u>stainless steel</u>, annularly threaded, 2% and  $2\% \frac{by}{2} 0.083$  and 0.095-in. 0.095 nails with slightly countersunk 3/16-in. head and medium diamond point. (See **common siding nail**.)

#### Interior and Flooring2.2.4 INTERIOR AND FLOORING NAILS

**brad**\*—small nail with small head.

*brad, common wire*— slender, regular-stock-steel,  $\frac{3}{8}$  by  $\times$  0.035 to 6 by 0.262-in.  $\times$  0.262 wire nails with brad 0.050 to 0.331-in.0.331 head and medium diamond point.

*brad, cut*—slender, usually small, regular-stock-steel nails of same thickness throughout, but tapering in width; with slight projection on one side serving as head. Also, tapering, square-bodied, finishing nail with countersunk head.

**casing nail\***—bright or galvanized, slender, regular-stock-steel, 1  $\frac{by}{2}$  0.067 to  $\frac{31}{2}$   $\frac{by}{0.135-in.} \times 0.135$  nails with flat or cupped 0.099 to  $\frac{0.177-in.0.177}{0.177}$  casing head and medium diamond point for countersinking where concealment is important.

fine nail\*—slender, bright steel or copper,  $1\frac{1}{8}$  by  $\times 0.072$  with flat  $\frac{0.172 \text{-in} 0.172}{0.172}$  head, diamond point.

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finishing nail\*—slender, bright, regular-stock-steel, 1 by 0.058 to 4 by 0.135-in.  $\times$  0.135 nails with flat or cupped 0.086 to 0.177-in. 0.177 brad head and medium diamond point for countersinking where concealment of head is important. (See also, fine nail, moulding and trim nails, wallboard nails.)

### **Document Preview**

**flooring brad**—bright, regular-stock–steel, 2 by 0.120 to 4 by 0.192–in:  $\times$  0.192 nails with deep (32°) countersunk flat or cupped 0.162 to 0.244–in.0.244 head and medium diamond point. Also, slender, bright, regular-stock-steel, 1<sup>1</sup>/4 by  $\times$  0.076 to 2 <sup>1</sup>/<sub>2</sub> by 0.113–in:  $\times$  0.113 nails with deep (32°) countersunk flat or cupped or brad 0.128 to 0.155–in: 0.155 head and blunt diamond point.

*machine flooring brad*—bright, regular stock-steel, 1 by 0.072-in.× 0.072 nail with special 0.113-in.0.113 brad head with cylindrical rim and medium diamond point.

**flooring nail\***—bright, stiff-stock or hardened-steel, helically <u>and annularly</u> threaded, 1 by  $\times 0.072$  to 3<sup>1</sup>/<sub>2</sub> by  $\frac{0.148 \text{-in.} 0.148}{0.148 \text{-in.} 0.148}$  nails with flat or checkered %4 to %2-in. countersunk or casing head and blunt diamond point.

**furring nail**—galvanized, regular-stock-steel,  $1\frac{1}{4}$  to  $2\frac{1}{2}$  by 0.106-in.× 0.106 nails with  $\frac{3}{8}$ -in. flat head, medium diamond point, and washer or spacer on shank; for fastening reinforcing wire mesh and spacing it from nailing member.

moulding and trim nail—bright zinc-plated, slim, hardened-steel,  $1\frac{1}{4}$  by  $\times 0.054$  to  $2\frac{1}{2}$  by 0.083-in.  $\times 0.083$  nails with blunt point and button head. (See finishing nail, fine nail, hardboard nail, insulation building-board nail, tileboard nail, wallboard nail.)

**parquet flooring nail**—hardened-steel, annularly threaded,  $1\frac{1}{8}$  by  $\times 0.062$  to  $1\frac{1}{4}$  by 0.072-in.  $\times 0.072$  nails with deep countersunk 0.080 to 0.113-in. 0.113 casing head and diamond or needle point.

**wallboard nail**—slender, <u>bright and colored</u> (baked-lacquer finished), hardened-steel, smooth or annularly threaded,  $1\frac{1}{8}$  by  $\underline{x}$  0.062 to 2 by 0.083-in.  $\underline{x}$  0.083 nails with slightly countersunk 0.109 to  $\underline{0.181-in.0.181}$  head and medium diamond or long needle point.

### ∰ F547 – 22

#### Miscellaneous Construction 2.2.5 MISCELLANEOUS CONSTRUCTION NAILS

**brick-siding nail**—galvanized, colored (baked-lacquer finished), <u>plain-shank</u><u>smooth shank</u><u>barbed</u> or annularly threaded, regular-stock-steel,  $\frac{7}{8}$  by 0.092 to 2  $\frac{1}{2}$  by 0.099-in.x 0.099 nails with flat checkered  $\frac{3}{16}$  or  $\frac{1}{4}$ -in. head and medium diamond point.

**common cut nail\***—normally, wedge-shaped,  $\frac{1}{2}$  to <u>6-in.6</u> nails of various types sheared from stiff-stock-sheet steel, with sheared-square point end narrower than upset head end.

**concrete nail\***—hardened-steel, smooth or deformed shank round or square  $\frac{1}{2}$  by  $\times$  0.148 to 3 by 0.181-in.  $\times$  0.181 nails with flat countersunk  $\frac{5}{16}$  to  $\frac{0.284-in.0.284}{0.284}$  head and medium diamond point.

**corker nail\***—usually coated, slender, regular-stock-steel, 1 by  $\times$  0.062 to 57/8 by 0.244-in.  $\times$  0.244 nails with 5/32 to 1/2-in. sinker head and medium diamond point.

**double-headed\*, duplex-head, dual-head, nail**—bright or coated, regular-stock-steel,  $1\frac{3}{4}$  by  $\times$  0.113 to 4 by 0.207-in:  $\times$  0.207 nails with double  $\frac{3}{16}$  to  $\frac{7}{16}$ -in. head, medium diamond point, and  $\frac{1}{4}$  to  $\frac{7}{16}$ -in. distance between head to be struck by hammer and bearing head. Length of nails measured from bearing surface of head.

**glulam rivet nail**\*—<u>plainbright</u> or galvanized, flat, hardened-steel,  $2\frac{3}{8}$  by  $\times \frac{1}{4}$ -in. nail with sheared V-shaped point and flat upset wedge-shaped head; designed to be driven through undersize truncated apertures in regular-stock-steel connector plates from which nails cantilever into wood.

**gypsum-lath nail**—bright or blued, regular-stock-steel, 1 by 0.092 to 1<sup>1</sup>/<sub>4</sub> by 0.166 and 1<sup>3</sup>/<sub>4</sub> by 0.092-in.x 0.092 nails with large flat 1%4 to 3%-in. head and long diamond point. Also, regular-stock-steel, 1 by 0.120 to 1<sup>1</sup>/<sub>2</sub> by 0.148-in.x 0.148 nails with flat  $\frac{1}{2-in}$  head and medium diamond point. Also, aluminum-alloy, 1<sup>1</sup>/<sub>8</sub> by 0.099 to 1<sup>1</sup>/<sub>2</sub> by 0.105-in.x 0.105 nails with flat 1%4 or  $\frac{5}{14-in}$  head and medium diamond point.

https://standards.iteh.ai/catalog/standards/sist/a1bb16ac-2468-49b6-8a97-ba61Be17288/astm-1547-22 gypsum-wallboard nail\*, gypsumboard nail\*, drywall nail\*—bright or blued, regular-stock-steel, annularly threaded, 1<sup>1</sup>/<sub>8</sub> by  $\ge 0.098$  to 2 by 0.105-in.  $\ge 0.105$  nails with flat, nub, or crossed slightly countersunk <sup>1</sup>/<sub>4</sub> to <sup>1</sup>%<sub>4</sub>-in. head and long diamond point. Also, slender, colored (baked-lacquer finished), regular-stock-steel, smooth or annularly threaded, 1<sup>1</sup>/<sub>8</sub> by 0.062 to 2 by 0.083-in.  $\ge 0.083$  nails with slightly countersunk 0.181-in.0.181 head and medium diamond or long needle point.

insulation building-board nail, tileboard nail—galvanized, electro-galvanized or cadmium or nickel-plated, regular-stocksteel, 1<sup>1</sup>/<sub>4</sub> and 1<sup>3</sup>/<sub>4</sub> by 0.054-in.x 0.054 nails with flat <sup>3</sup>/<sub>32</sub>-in. head and medium needle point. Also, plainbright or colored (baked-lacquer finished) hardened-steel, smooth or annularly threaded, 1<sup>1</sup>/<sub>4</sub> by x 0.054 to 1<sup>3</sup>/<sub>4</sub> by 0.062-in.x 0.062 nails with slightly countersunk 0.109-in.0.109 head and medium diamond or long needle point.

insulation-lath nail—blued, regular-stock-steel,  $1\frac{1}{8}$  and  $1\frac{3}{4}$  by 0.092-in.× 0.092 nails with flat  $\frac{3}{8}$ -in. head and long diamond point. (See gypsum-lath nail.)

insulation-sheathing nail—galvanized, barbed, regular-stock-steel, 1<sup>3</sup>/<sub>4</sub> and 2 by  $\times$  0.115 or  $\frac{0.120 \text{-in.} 0.120}{\text{-in.} 0.120}$  nails with flat  $\frac{7}{16}$  or  $\frac{1}{2}$ -in. head and medium diamond point.

#### lath nail\*, metal-lath nail, hook-head metal-lath nail\*----

straight—bright or blued steel 1 byx 0.058 to 1<sup>1/2</sup> byx 0.080 shank, 0.141 to 0.218 flat round head, diamond point.

*hooked head*\*—bright, blued or zinc coated steel,  $1\frac{1}{8}$  by 0.106-in.x 0.106 nail with thin flat  $\frac{7}{16}$  or  $\frac{1}{2}$ -in. hook head and medium diamond point.

## 🕼 F547 – 22

**masonry nail\***—<u>plain,bright</u>, electro-zinc-plated or galvanized, hardened-steel, knurled (longitudinally or nearly longitudinally threaded or fluted),  $\frac{1}{2}$  to 4 by  $\times$  0.148 or up to 0.250-in.0.250 nails with flat or checkered  $\frac{5}{16}$  to  $\frac{9}{16-in}$  head and medium diamond point.

#### masonry stub nail\*—smooth shank, zinc coated, 0.375 diameter flat or beveled flat head, $\frac{3}{8}$ to $2\frac{1}{2} \times 0.148$ diameter

sheet-metal nail—nail stamped out of sheet metal and formed to desired shape. (See roofing nail.)

tile nail—acoustical-tile nailslender, electroplated, regular-stock-steel or stiff-stock, 1 to  $1\frac{3}{4}$  by 0.062-in.× 0.062 nails with  $\frac{1}{4\text{-in}}$  projection head with 0.135-in.0.135 collar and sharp, blunt, or medium diamond point.

wood-lath nail—blued, regular-stock-steel, 1 and  $1\frac{1}{8}$  by  $\times$  0.054 and 0.072-in. 0.072 nails with flat  $\frac{1}{8}$  to  $\frac{11}{64}$ -in. head and medium diamond point.

#### 2.3 NAIL TYPES USED IN SPECIALIZED APPLICATIONS

**broom nail\***—bright, regular-stock-steel,  $\frac{5}{8}$  to  $\frac{3}{4}$  by  $\times 0.072$  or  $\frac{0.080 \text{-in.} 0.080}{0.080 \text{-in.} 0.080}$  nails with flat  $\frac{13}{64}$  or  $\frac{7}{32}$  in. head and medium diamond point.

cleat—L-shaped nail.

# **iTeh Standards**

**cleat nail**—bright, regular-stock-steel,  $1\frac{1}{8}$  by  $\times 0.080$  to  $1\frac{7}{8}$  by 0.106-in.  $\times 0.106$  nails with oval  $\frac{3}{16}$  to  $\frac{1}{4}$ -in. head and duckbill or clinch point. (See **clinch nail**.)

### **Document Preview**

**clinch nail**—any nail designed for clinching after driving. Bright, regular-stock-steel, 1 by  $\times$  0.080 to 4 by 0.177-in.  $\times$  0.177 nails with oval  $\frac{3}{16}$  to  $\frac{3}{8}$ -in. head and duckbill or clinch point. (See **cleat nail**.)

<u>STM F547-22</u>

**clout nail**—bright, steel,  $\frac{3}{4}$  by  $\underline{\times}$  0.072 to  $\frac{1}{2}$  by 0.092- in.  $\underline{\times}$  0.092 nails with large flat 0.225 to 0.262-in.0.262 head and long side point or duckbill point.

**conduit nail**—bright or copper-plated, steel or hardened steel,  $1\frac{3}{4}$  to  $3\frac{1}{2}$  by 0.161-in.x 0.161 nails with annularly threaded shank; bent, curved hook head, and medium needle point. Different types of head designed for fastening  $\frac{1}{2}$ ,  $\frac{3}{4}$ , or  $\frac{1-\text{in.}1}{2}$  conduit, tubing, pipe, cable, etc.

**cork-insulation nail**—galvanized, regular-stock-steel, 3 to 9 by 0.148-in.x 0.148 nails with flat  $\frac{1}{2}$ -in. head and medium diamond point.

escutcheon pin—small, regular-stock-steel or nonferrous,  $\frac{1}{4}$  by 0.035 to 2 by 0.092-in.  $\times$  0.035 to 2  $\times$  0.092 nails with oval head and medium diamond point.

**fence nail**—stout, bright, regular-stock-steel,  $1\frac{3}{4}$  by  $\times 0.135$  to 4 by 0.225-in.  $\times 0.225$  nails with large flat  $\frac{9}{32}$  to  $\frac{15}{32}$ -in. head and medium diamond point.

file-grip nail, file-thread nail—terms applied to helically threaded nails provided with file threads. (See thread.)

**flattened-shank nail**—round wire nail with portion of shank flattened for a certain distance between point and head to facilitate driving of nail between steel members and wrapping of flattened portion of shank around steel rod during driving.

## ∰ F547 – 22

foundry nail, smooth foundry nail—bright, regular-stock-steel,  $\frac{3}{4} \frac{\text{by} \times 0.120}{\text{by} \times 0.162 - \text{in} \times 0.162}$  nails with large thin flat  $\frac{7}{16}$  to  $\frac{1}{2} - \frac{1}{2}$ .

furniture nail—plated, regular-stock-steel or brass, <sup>3</sup>/<sub>8</sub> to <sup>3</sup>/<sub>4</sub>-in. nails with extra large, decorative head and long diamond or needle point.

hardened nail-heat-treated medium-low or medium-high carbon-steel nail.

**hinge nail**—light or heavy, bright, regular-stock-steel,  $1\frac{1}{4} \frac{byx}{2}\frac{3}{16}$  to  $4\frac{byx}{2}\frac{3}{8-in}$ . nails with flat or oval countersunk (95°) or oval  $\frac{1}{4}$  to  $\frac{1}{2-in}$ . head and long diamond or chisel point.

**hob nail**—stout, regular-stock-steel, <sup>3</sup>/<sub>8</sub> to <sup>5</sup>/<sub>8</sub>-in. nails with large decorative (high square, fancy, round bevel, checkered, grooved, etc.) head and sheared-bevel point.

lino-nail—bright, regular-stock-steel, <sup>5</sup>/<sub>8</sub> by 0.062-in.x 0.062 nail with oval head and medium diamond point.

**pallet nail\***—bright, stiff-stock or hardened-steel, helically threaded (with medium lead angle) or annularly threaded,  $1\frac{1}{2}$  by  $\times$  0.105 to 4 by 0.177-in.  $\times$  0.177 nails with smooth or checkered flat  $\frac{9}{32}$  to  $\frac{7}{16-in}$  head and medium or blunt diamond or blunt chisel point.

peerless cut nail—name for small, regular-stock-steel, cut nails with broad flat circular head and sheared long-tapered square point to facilitate clinching.

**ratchet nail**—bright, steel,  $\frac{3}{4}$  to 2 by 0.120-in.× 0.120 nails with single-crest annular ratchet thread, flat  $\frac{3}{8-in}$ . head and medium diamond point

**roll-grooved nail**—bright or plated, helically grooved, round-wire, stiff-stock, 1 by  $\times$  0.086 to 4 by 0.164-in.  $\times$  0.164 drive-screw nails with no clearance between flutes and head, with flat or slightly countersunk head and medium or long diamond point, with crest diameter being referred to as diameter.

shade bracket nail—bright, regular-stock-steel,  $\frac{3}{4}$  to 1 by  $\times$  0.080 or  $\frac{0.092 \text{-in.} 0.092}{\text{-in.} 0.092}$  nails with slightly countersunk  $\frac{1}{2}$  or  $\frac{9}{32 \text{-in.}}$  head and needle point.

**smooth-edge carpet plywood strip nail**— hardened-steel,  $^{11}/_{16}$  by 0.105-in:  $\times 0.105$  nail with countersunk flat  $^{7}/_{32}$ -in. head and long diamond point.

stout nail—nails with shank diameter usually at least one gage larger than common nails of same length.

strap nail—bright, regular-stock-steel,  $1\frac{1}{4}$  by  $\times$  0.092 to 2 by 0.113-in.  $\times$  0.113 nails with oval  $\frac{15}{64}$  to  $\frac{17}{64}$ -in. head and short diamond point.

strip nail—steel, 1<sup>1</sup>/<sub>4</sub> to 2<sup>1</sup>/<sub>2</sub>-in. nails spot welded to disposable metal strip that feed nails into nailing machine provided with

# 🕼 F547 – 22

staple-type magazine. During punching of nail from strip, small washer is formed under head. Also, nail stored in special strip to serve as magazine for feeding nailing machine.

**T nail**—bright, etched, coated, galvanized, aluminum-coated, plastic-coated, knurled or annularly threaded, stiff-stock or aluminum-alloy, round-wire, 1 by  $\times$  0.080 to 2<sup>1</sup>/<sub>2</sub> by 0.131-in.  $\times$  0.131 nails of T shape with <sup>5</sup>/<sub>32</sub> or <sup>17</sup>/<sub>64</sub>-in. round, square or oval-finish head of sinker, with or without heavy fillet, and with diamond or chisel point; driven with special nailing machine provided with staple-type magazine.

**toothed nail**—flat, L-shaped, <sup>1</sup>/<sub>2</sub> to 1<sup>15</sup>/<sub>16</sub> –in. cleats, sheared from 16-gage steel sheet; provided with toothed serrations along narrow sides of long shank and with slightly tapered, dull point; driven with special nailing machine provided with staple-type magazine.

**twisted nail**—helically twisted, squarewire,  $\frac{1}{2}$  by  $\times$  0.072 to 6 by 0.250-in.  $\times$  0.250 drivescrew nails, usually of tempered stiff-stock, with flat or countersunk head and medium diamond point, with crest diameter being referred to as diameter.

twist nail—slender, copper or aluminum nails with flat head and medium needle point for twist clinching, that is, for having part of nail shank twisted to form a clinched point.

**upholstery nail**—bright, regular-stock-steel, two-piece nails with extra-large specially formed head and medium diamond or needle point.

"V" nail-headless nails with central V-shaped slot at head end.

wire nail-nail manufactured from metal wire or rod.

### 2.4 FINISH, COATING, AND GALVANIZATION TERMS

### 2.4.1 FINISH AND COATING TERMS

**ASTM F547-22** 

aluminized—dipped in molten aluminum for coating purposes resulting in smooth, continuous, and adherent aluminum coating.

anodized aluminum-natural-colored or surfacecolored aluminum having increased anodic corrosion resistance.

**blued**—heated to result in oxidized bluish surface of steel nail.

**bright, bright finish**—term applied to nails with natural bare surface resulting from cleaning of nails which have not undergone treatments affecting finish, such as hardening, bluing, coating, plating, etching, painting, etc. Also applied to polished appearance after plating.

**cement-coated**—surface coated by tumbling or immersion in natural resin or shellac to produce a limited temporary bond between driven nail and surrounding wood, provided coating is not removed during driving, and to reduce rusting during storage.

**clad**—surface sheathed.

**coated**—covered fully or partially with natural resin or any other material that is retained on the surface to add lubricity, conversion coating to provide ease of driving, increased holding power, corrosion resistance, enhance installed appearance or a combination of these.

**coppered, copper-washed**—all surfaces chemically plated with copper, usually by chemical rather than electrolytic process. (See electroplated.)