



Designation: F1667/F1667M – 21a

Standard Specification for Driven Fasteners: Nails, Spikes, and Staples¹

This standard is issued under the fixed designation F1667/F1667M; 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 (ϵ) indicates an editorial change since the last revision or reapproval.
The Commercial and Government Entity (Cage) Code for ASTM: 81346.

1. Scope*

1.1 This specification covers nails, spikes, staples, and other driven fasteners, as listed in [Table 1](#).

NOTE 1—Fastener ductility information is presented in [Table 2](#) and dimensional information in Tables 3–63.

1.2 Fasteners described in this specification are driven by hand tool, power tool, or mechanical device in single or multiple strikes and are positioned by hand, tool, or machine.

1.3 This specification is applicable in either inch-pounds (F1667) or SI units [F1667M]. Values stated in SI are a mathematical conversion to two significant digits and are shown in brackets [].

1.4 Fasteners in this specification are sold in bulk (loose) form and are collated for loading into the magazine of an application tool. Other than as covered in Section 9, Workmanship, cohering materials (including, but not limited to, plastic, adhesive bond, paper tape, plastic strip, plastic carrier, wire, etc.) and relative orientation of collated fasteners are not within the scope of this standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This specification is under the jurisdiction of ASTM Committee F16 on Fasteners and is the direct responsibility of Subcommittee F16.05 on Driven and Other Fasteners.

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2. Referenced Documents

2.1 *ASTM Standards*:²

[A153/A153M Specification for Zinc Coating \(Hot-Dip\) on Iron and Steel Hardware](#)

[A641/A641M Specification for Zinc-Coated \(Galvanized\) Carbon Steel Wire](#)

[B695 Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel](#)

[C514 Specification for Nails for the Application of Gypsum Board](#)³

[C1063 Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster](#)⁴

[C1861 Specification for Lathing and Furring Accessories, and Fasteners, for Interior and Exterior Portland Cement-Based Plaster](#)⁴

[F547 Terminology of Nails for Use with Wood and Wood-Base Materials](#)

[F592 Terminology of Collated and Cohered Fasteners and Their Application Tools \(Withdrawn 2017\)](#)⁵

[F680 Test Methods for Nails](#)

[F1575/F1575M Test Method for Determining Bending Yield Moment of Nails](#)

[F3359/F3359M Test Method for Determining Bending Yield Moment of Staples](#)

3. Terminology

3.1 *Definitions*—The definitions used in this specification are those of common commercial acceptance and usage and also appear in Terminologies [F547](#) and [F592](#).

² 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.

³ Additional material and dimensional tolerance for nails used in Gypsumboard are addressed in [C514](#).

⁴ Nails addressed in Table 23 are referenced for use in [C1063](#) and [C1861](#).

⁵ The last approved version of this historical standard is referenced on www.astm.org.

*A Summary of Changes section appears at the end of this standard

TABLE 1 Classification and Identification Index

Type	Style	Style Identification	Table
I—Nails (NL)	1. Brads	BR	3
	2. Barrel	BL	4
	3. Box A	BXA	5
	Box B	BXB	6
	4. Broom	BM	7
	5. Casing	CN	8
	6. Cooler	CL	9
	7. Sinker	SK	10
	8. Corker	CK	11
	9. Aluminum	CMA	12
	Common		
	Copper	CMC	13
	Common		
	Steel	CMS	14
	Common		
	Power-tool		
	Driven		
	Common		
	10. Concrete	CTS/CTM	16
	11. Double-headed (Duplex)	DH	17
	12. Finish	FH	18
	13. Flooring	FL	19
	14. Lath	LHF	20
	Lath	LHH	21
	15. Masonry	MR/MRH	22
	Masonry Stub Nail	MRST	23
	16. Pallet	PL	24
	17. Gypsum wallboard	GW	25
	18. Aluminum	RFA	26
	Roofing		
Steel	RFS	27	
Roofing			
Copper-Clad	RFC	28	
Roofing			
Umbrella			
Head	RFL	29	
Roofing			
Steel	RFR	30	
Reinforced			
Roofing			
Cap Nail	MRH/PRH	31	
Hand Driven			
Roofing			
Cap Nail	MRP/PRP	32	
Power-Tool Driven			
Roofing			
Washed			
Aluminum	RFNS/RFND	33	
Roofing			
Washed			
Steel	RFE	34	
Roofing			
19. Shingle	SHAD/SHAS	35	
Steel Shingle	SHSS/SHSR	36	
20. Siding	SDF/SDC/SDK	37	
21. Slating	SLA/SLC/SLS	38	
22. Rubber heel	RH	39	
23. Underlayment	UL	40	
24. Square-barbed	SB	41	
25. Masonry drive	MD	42	
26. Escutcheon	ES	43	
27. Glulam rivet	GR	44	
28. Post frame	PFRS	45	
Ring Shank			
Roof Sheathing Ring	RSRS	46	
Shank			
Standard Ring Shank	SRS	47	
29. Metal	MHS/MHR	48	
Hardware			
Nails			
II—Cut nails (CN)	1. Common	CM	49
	2. Basket	BK	50
	3. Clout	CL	51

TABLE 1 Continued

Type	Style	Style Identification	Table
III—Spikes (SP)	1. Common	CM	52
	2. Gutter	GRF/GRO	53
	3. Round	RDC/RDF	54
IV—Staples (ST)	1. Fence	FN	55
	2. Poultry netting	PN	56
	3. Flat top crown	FC	57
	Flat top crown	FCC	58
	4. Round or V crown	RC	59
	5. Preformed	PC	60
	6. Electrical	PE	61
	7. Preformed hoop	PH	62
8. Cap	STC	63	

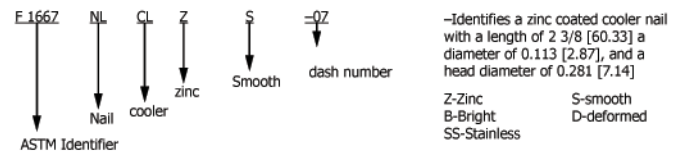
TABLE 2 Bend Angles for Fasteners Using the Test Methods F680 Bend Test

Fastener Material	Bend Angle, °
1. Steel wire: (low-carbon, medium-low carbon, medium-carbon) (unhardened)	180
2. Stainless steel wire	180
3. Hardened steel fasteners	20
4. Sheet steel for cut nails, Type II, and cut spikes, Type III	90
5. Copper (min 98 %)	180
6. Copper clad wire (min 20 %)	180
7. Aluminum alloy wire	90
8. Brass wire	180

4. Classification

4.1 The fasteners and their Table 1 classification are identified as follows:

NOTE 2—The identification of fasteners, classified by style and type (alpha indicators) followed by a dash number (numerical code) based on Tables 3–63, identifies dimensions specifically and establishes a PIN (part identifying number) system when preceded by the F1667 ASTM designator of this specification. For example:



4.2 The trade designation, S, pennyweight, used in commercial practice is referenced in Tables 3–48 wherever it applies.

5. Ordering Information

5.1 Orders for driven fasteners under this specification shall include the following information:

- 5.1.1 Quantity;
- 5.1.2 Part identifying number (PIN) or product description (see 4.1 and appropriate table);
- 5.1.3 Special material requirements, if specified, including coatings or finishes;
- 5.1.4 ASTM designation;
- 5.1.5 Packaging requirements;
- 5.1.6 A producer's or supplier's certification that the material and the finished fastener are in compliance with this specification, furnished only when specified in the purchase order;

5.1.7 Supplementary requirements, if any; and

5.1.8 Any additions agreed upon between the purchaser and the supplier.

6. Material Requirements

6.1 Steel wire used in the manufacture of driven fasteners shall be of low carbon, medium-low carbon, or medium-high carbon.

6.2 Stainless steel wire used in the manufacture of driven fasteners shall be of Types 302, 304, 305, or 316.

6.3 Carbon steel wire for the manufacture of hardened steel nails shall be suitable for heat treatment to a minimum hardness of 37 HRC.

6.4 Sheet steel used in the manufacture of cut nails (Type II) and cut spikes (Type III) shall be a medium-carbon sheet steel.

6.5 Copper used in the manufacture of driven fasteners shall contain a minimum of 98 % pure copper.

6.6 Copper-clad steel wire used in the manufacture of driven fasteners shall contain not less than 20 % copper by weight. The average thickness of copper on the steel wire shall be not less than 10 % of the radius of the clad wire; the minimum thickness of copper on the steel wire shall be not less than 8 % of the radius of the clad wire.

6.7 Aluminum alloy wire used in the manufacture of fasteners shall conform to Alloy 2024, 5056, 6061, or 6110 and have a minimum ultimate tensile strength of 60 000 psi [413.69 MPa].

NOTE 3—Smooth shank nails are sometimes chemically treated to remove grease, oil, and foreign matter and to roughen the surface microscopically. Mechanically deformed nails are sometimes cleaned to remove grease and foreign matter.

6.8 Brass wire used in the manufacture of fasteners shall be of good commercial quality suitable for the purpose.

7. Physical Properties

7.1 *Ductility*—The fasteners shall be sufficiently ductile to withstand cold bending without fracture, as specified in [Table 2](#) for various materials used in the manufacture of fasteners utilizing the conventional bend test described in Test Methods [F680](#). Mandrel diameter used in this test shall not exceed nail/wire diameter. The cold bend test shall not apply to unhardened nails with deformed shanks.

7.2 *Tensile Strength*—Finished driven fasteners are not normally subject to tension testing. However, the wire or sheet used to manufacture the fastener is tested as required for control in the production process during manufacture.

8. Dimensions and Tolerances

8.1 Nominal dimensions of nails and spikes shall be as shown in Tables 3–53. The following dimensional designations shall apply:

S = trade designation (reference in penny weight),
L = length, in. [mm],
H = head diameter or width, in. [mm],
D = shank diameter, in. [mm],

*D** = measured shank diameter, in [mm] (Tables 45–47),
TI = measure crest diameter of deformed portion on nail shank in, [mm] (Tables 45–47),
*TI-D** = measured crest diameter minus the measured shank diameter in, [mm] (Tables 45–47),
TL = length of threaded section of nail shank, [mm] (Tables 45–47),
P = pitch or spacing of rings on a ring shank nail [mm] (Tables 45–47), and
B = head separation, in. [mm] (Table 17).

8.1.1 The lengths, *L*, of nails and spikes with flat heads or parallel shoulders under the head shall be measured from under the head or shoulder to the tip of the point. All other nails and spikes shall be measured overall.

8.1.2 The diameter, *D*, of smooth shank nails and spikes shall be measured away from the gripper marks. The diameter, *D*, of deformed shank nails shall be measured before deformation, or when available, the smooth section of the shank away from any gripper marks. All diameter dimensions shall be taken prior to the application of or after the removal of any coatings or finish.

8.2 Tolerances on Nominal Dimensions for Nails and Spikes:

8.2.1 Length tolerances shall be:

8.2.1.1 $\pm 1/32$ in. [0.79 mm] for lengths up to and including 1 in. [25.40 mm];

8.2.1.2 $\pm 1/16$ in. [1.59 mm] for lengths over 1 in., [25.40 mm] up to and including 2½ in. [63.50 mm];

8.2.1.3 $\pm 3/32$ in. [2.38 mm] for lengths over 2½ in. [63.50 mm], up to and including 7 in. [177.80 mm];

8.2.1.4 $\pm 1/8$ in. [3.18 mm] for all lengths over 7 in. [177.80 mm].

NOTE 4—Tolerance for the length of any shank deformation shall be the same as the length of the nail shank.

8.2.2 Shank diameter tolerances shall be:

8.2.2.1 ± 0.002 in. [0.05 mm] for diameters smaller than 0.076 in. [1.93 mm], and

8.2.2.2 ± 0.004 in. [0.10 mm] for diameters 0.076 in. [1.93 mm] and larger.

8.2.3 *Head Diameter Tolerances:*

8.2.3.1 *Hand Driven*—Tolerances on concentric round head diameters shall be ± 10 % of the nominal head diameter (individual measurement). The difference in diameter across the long axis shall not exceed that across the short axis by more than 10 %. A fillet shall be provided under the head if not otherwise specified.

8.2.3.2 *Power-Tool Driven*—Tolerances on head dimensions of power-tool driven nails shall comply with the nail manufacturer's specifications and shall be suitable for use in the make and model of the tool specified.

8.3 Nominal dimensions of staples shall be as shown in Tables 55–61, and the following dimensional designations shall apply:

8.3.1 *Hand Tool–Driven Nominal Dimensions:*

L = leg length, inside, in. [mm],
D = round leg diameter, in. [mm],

C = crown width, inside, in. [mm].

8.3.2 Power Tool–Driven Nominal Dimensions:

D = round leg diameter, in. [mm],
 L = leg length, outside, in. [mm],
 T = leg thickness, in. [mm] (see Tables 57 and 58),
 W = leg width, in. [mm] (see Tables 57 and 58),
 C = crown width, outside, in. [mm], and
 G = steel wire gage.

8.4 Tolerances on Nominal Dimensions for Staples:

8.4.1 Leg length, L , tolerances shall be $+1/32$ in. [0.79 mm], $-1/64$ in. [-0.40 mm] for both hand tool–driven and power tool–driven staples.

8.4.2 Diameter tolerances for hand tool-driven round staples shall be:

8.4.2.1 ± 0.002 in. [0.05 mm] for diameters smaller than 0.076 in. [1.95 mm], and

8.4.2.2 ± 0.004 in. [0.10 mm] for diameters equal to and larger than 0.076 in. [1.95 mm].

8.4.3 Thickness and width tolerances on power-tool driven staples shall comply with the manufacturer’s specification and shall be suitable for use in the make and model tool specified. When used in wood structural connections, dimensions and tolerances in Tables 57 and 58 shall apply.

8.4.4 Crown width tolerances are $\pm 1/32$ in. [0.79 mm] unless otherwise specified.

8.5 *Nominal Dimensions for Cut Nails, Type II*—Unless otherwise specified, cut nails shall be sheared from medium carbon sheet steel and shall have a wedge-shaped shank with a sheared square point end narrower than the upset head end. The designation T in Tables 50–51 refers to sheet thickness in finished product. Other designations shall be the same as those for nails in 8.1.

8.6 When gage is used as a nominal diameter dimension for nails in the application of this specification, a decimal equivalent shall also be provided. (See Note 5.)

NOTE 5—Wire gage standards differ by base metal. For that reason, wire gage specifications are not referenced in this specification for nails, and gage as a specification requires the decimal equivalent for interpretation.

8.7 When gage is used as a nominal diameter for staples in the application of this specification, it shall be in accordance with the dimensional equivalents shown in the corresponding tables of this specification. (See Note 6.)

NOTE 6—For certain staples, the diameter of the round wire used is designated as gage prior to flattening and forming into the shape of the staple.

9. Workmanship

9.1 Fasteners covered by this specification shall be true to shape, well-finished, free from imperfections, clean, and free of corrosion. Power-tool driven collated items shall be uniform and aligned properly in their assembled form for use in power tools.

10. Protective Coatings and Finishes

10.1 Zinc Coating:

10.1.1 Driven fasteners required to be zinc coated shall be cut and formed from hot-dip, galvanized steel wire or electrogalvanized steel wire or they shall be cut from uncoated (bright) steel wire and galvanized after forming.

10.1.2 Hot-dip galvanized nails:

10.1.2.1 Hot-dip galvanized steel wire for the manufacture of fasteners shall have a coating weight in accordance with Specification A641/A641M, Supplementary Requirements, Class 3S, when a heavier coating for exterior use and/or use in treated wood is specified. The minimum zinc coating shall be in accordance with Supplementary Requirements, Class 1, unless otherwise specified.

10.1.2.2 Hot-dip galvanized steel fasteners coated after forming shall have a coating weight in accordance with Specification A153/A153M, Class D, when a heavier coating for exterior use and/or use in treated wood is specified. The minimum coating weight shall be in accordance with Specification A641/A641M, Supplementary Requirements, Class 1.

10.1.3 Electrogalvanized steel fasteners cut and formed from electrogalvanized steel wire or electrogalvanized after forming shall have a regular coating (no minimum weight of coating specified) in accordance with Specification A641/A641M, 9.2, unless otherwise specified.

10.1.4 Mechanically deposited zinc coatings applied to fasteners after forming shall have a thickness in accordance with Specification B695, Class 40, unless otherwise specified.

10.2 Other Coatings and Finishes (When Specified):

10.2.1 Chemical etching shall remove the polish of fabrication and roughen the surface microscopically.

10.2.2 Blued nails shall be heated to form a thin, colored oxide on the surface.

10.2.3 Miscellaneous finishes and coatings, such as polymer coatings, tin plating, liquor, brass plating, copper plating, phosphate coating, or oil coating shall be applied.

NOTE 7—Polymer coatings are often used to assist in the driving of power-tool driven fasteners.

10.3 Altered Shapes and Deformations:

10.3.1 Mechanically formed or deformed nail shanks shall have barbs, flutes, threads, or angular serrations formed onto the wire from which the nail is manufactured. Mechanically deformed shanks shall have vertical or helical flutes or screw-type or annular (ring)-type deformations rolled onto the shank. Symmetrical helical shank deformations shall be obtained by twisting square wire. The deformations shall pass entirely around the shank body, resulting in expanded ridges and depressions. Interruptions in shank deformation to facilitate attachment of materials for collating nails is permitted.

10.3.2 Head shapes and head dimensions of power-tool driven nails shall comply with the nail manufacturer’s specifications and shall be suitable for use in the make and model of the tool specified.

10.3.3 Staples manufactured for intended use in power tools shall comply with the tool manufacturer’s specification. When used in wood structural connections, dimensions and tolerances for Type IV, Style 3 (Table 57 or Table 58).

11. Certification

11.1 When specified in the purchase order, a producer’s or supplier’s certification shall be furnished to the purchaser, indicating that the fasteners are in compliance with this specification and the purchase order.

12. Packaging and Package Marking

12.1 Unless otherwise specified, fasteners shall be in substantial commercial containers of the type, size, and kind commonly used for the purpose, so constructed as to preserve the contents in good condition and to ensure acceptance and safe delivery by common or other carriers to the point of delivery. In addition, the containers shall be so made that the contents can be removed partially without destroying the container’s ability to serve as a receptacle for the remainder of the contents.

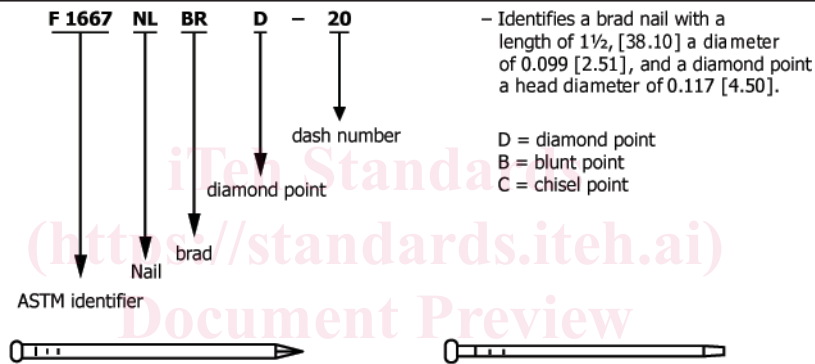
12.2 When specified, individual packages and shipping containers shall be marked with the part-identifying number, style (see Table 1), fastener length, diameter (or gage, as applicable) material (other than carbon steel), coating/finish, for nails-shank style (smooth, ring, screw, etc.), for staples –crown width, the name of the manufacturer or distributor, country of origin, and the quantity.

13. Keywords

13.1 diameter; driven fasteners; head; length; nails; point; spikes; staples

TABLE 3 Type I, Style 1—Brads^A

NOTE 1—Carbon steel wire, brad head, diamond point, round smooth shank, bright finish. When specified, brads shall have a modified brad head with a blunt or chiseled point for use with power tools.



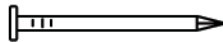
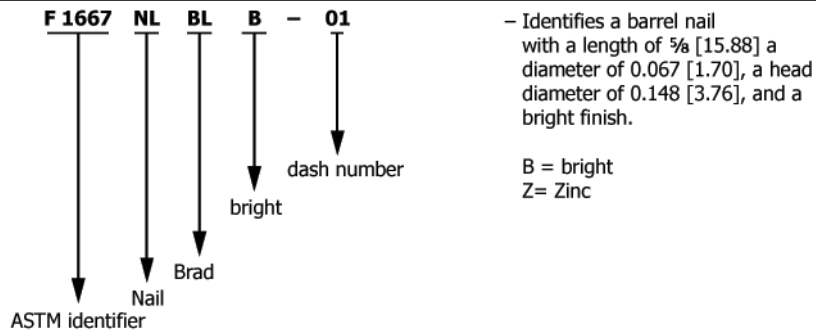
F 1667 NLBR				F 1667 NLBR			
Dash No	L	D	S	Dash No	L	D	S
01	3/8 [9.53]	0.035 [0.89]	...	21	1 3/4 [44.45]	0.062 [1.57]	...
02	1/2 [12.70]	0.035 [0.89]	...	22	1 3/4 [44.45]	0.080 [2.03]	...
03	1/2 [12.70]	0.048 [1.22]	...	23	1 3/4 [44.45]	0.099 [2.51]	5d
04	5/8 [15.88]	0.035 [0.89]	...	24	2 [50.80]	0.062 [1.57]	...
05	5/8 [15.88]	0.048 [1.22]	...	25	2 [50.80]	0.080 [2.03]	...
06	3/4 [19.05]	0.035 [0.89]	...	26	2 [50.80]	0.113 [2.87]	6d
07	3/4 [19.05]	0.048 [1.22]	...	27	2 1/4 [60.33]	0.080 [2.03]	...
08	3/4 [19.05]	0.062 [1.57]	...	28	2 1/4 [60.33]	0.113 [2.87]	7d
09	7/8 [22.23]	0.035 [0.89]	...	29	2 1/2 [63.50]	0.080 [2.03]	...
10	7/8 [22.23]	0.048 [1.22]	...	30	2 1/2 [63.50]	0.131 [3.33]	8d
11	7/8 [22.23]	0.062 [1.57]	...	31	2 3/4 [66.67]	0.131 [3.33]	9d
12	1 [25.40]	0.054 [1.37]	...	32	3 [76.20]	0.148 [3.76]	10d
13	1 [25.40]	0.062 [1.57]	...	33	3 1/4 [82.55]	0.148 [3.76]	12d
14	1 [25.40]	0.072 [1.83]	...	34	3 1/2 [88.90]	0.162 [4.11]	16d
15	1 1/4 [31.75]	0.054 [1.37]	...	35	4 [101.60]	0.192 [4.88]	20d
16	1 1/4 [31.75]	0.062 [1.57]	...	36	4 1/2 [114.30]	0.207 [5.26]	30d
17	1 1/4 [31.75]	0.080 [2.03]	3d	37	5 [127.00]	0.225 [5.72]	40d
18	1 1/2 [38.10]	0.054 [1.37]	...	38	5 1/2 [139.70]	0.244 [6.20]	50d
19	1 1/2 [38.10]	0.080 [2.03]	...	39	6 [152.40]	0.262 [6.65]	60d
20	1 1/2 [38.10]	0.099 [2.51]	4d

^A All dimensions are given in inches and [mm].

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TABLE 4 Type I, Style 2—Barrel Nails^A

NOTE 1—Carbon steel wire, flat head, diamond point, round smooth shank, bright, zinc coated or other coating as specified.



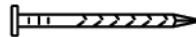
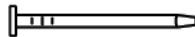
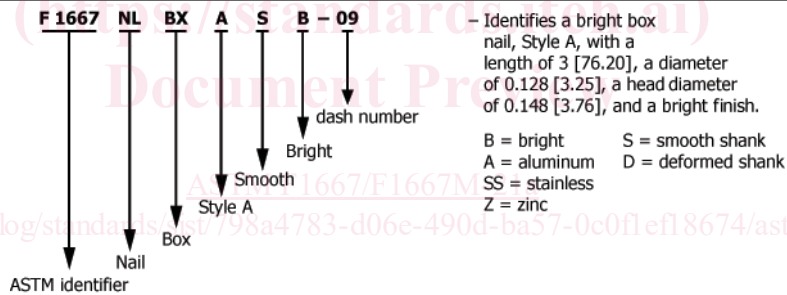
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Dash No	L	D	H	Dash No	L	D	H
01	5/8 [15.88]	0.067 [1.70]	0.148 [3.76]	05	1 1/8 [28.58]	0.148 [3.76]	0.312 [7.92]
02	3/4 [19.05]	0.067 [1.70]	0.148 [3.76]	06	1 1/4 [31.75]	0.148 [3.76]	0.312 [7.92]
03	7/8 [22.23]	0.076 [1.93]	0.177 [4.50]	07	1 3/8 [34.93]	0.162 [4.11]	0.344 [8.74]
04	1 [25.40]	0.076 [1.93]	0.177 [4.50]	08	1 1/2 [38.10]	0.192 [4.88]	0.406 [10.31]

^A All dimensions are given in inches and [mm].

TABLE 5 Type I, Style 3A—Box Nails^A

NOTE 1—Carbon steel, stainless steel or aluminium wire, flat head, diamond point, round, deformed or smooth shank, bright, zinc coated or other coating as specified. When specified, box nails shall have an altered or T-head with a diamond, blunt, or chisel point for use with power tools.



F 1667 NLBXA

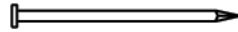
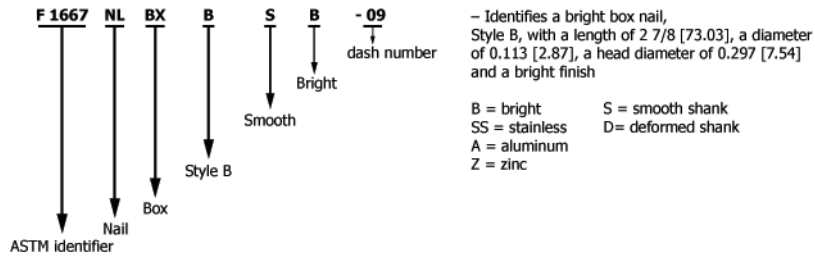
Dash No	S	L	D	H	Dash No	S	L	D	H
01	2d	1 [25.40]	0.067 [1.70]	0.188 [4.78]	08	9d	2 3/4 [69.85]	0.113 [2.87]	0.297 [7.54]
02	3d	1 1/4 [31.75]	0.076 [1.93]	0.219 [5.56]	09	10d	3 [76.20]	0.128 [3.25]	0.312 [7.92]
03	4d	1 1/2 [38.10]	0.080 [2.03]	0.219 [5.56]	10	12d	3 1/4 [82.55]	0.128 [3.25]	0.312 [7.92]
04	5d	1 3/4 [44.45]	0.080 [2.03]	0.219 [5.56]	11	16d	3 1/2 [88.90]	0.135 [3.43]	0.344 [8.74]
05	6d	2 [50.80]	0.099 [2.51]	0.266 [6.76]	12	20d	4 [101.60]	0.148 [3.76]	0.375 [9.53]
06	7d	2 1/4 [57.15]	0.099 [2.51]	0.266 [6.76]	13	30d	4 1/2 [114.30]	0.148 [3.76]	0.375 [9.53]
07	8d	2 1/2 [63.50]	0.113 [2.87]	0.297 [7.54]	14	40d	5 [127.00]	0.162 [4.11]	0.406 [10.31]

^A All dimensions are given in inches and [mm].

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TABLE 6 Type I, Style 3B—Box Nails^A

NOTE 1—Carbon steel, stainless steel or aluminum wire, flat head, diamond point, round, deformed or smooth shank, bright, zinc coated or other coating as specified.



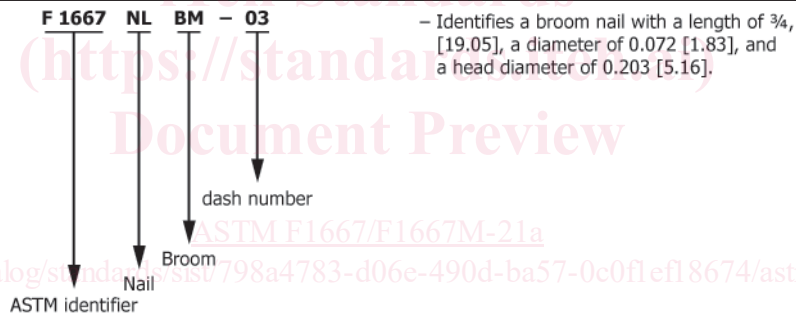
F 1667 NLBxB

Dash No	S	L	D	H	Dash No	S	L	D	H	
01	2d	1	[25.40]	0.058 [1.47]	0.172 [4.37]	06	7d	2 1/8 [53.98]	0.086 [2.18]	0.250 [6.35]
02	3d	1 1/8 [28.58]	0.062 [1.57]	0.188 [4.78]	07	8d	2 3/8 [60.33]	0.099 [2.51]	0.266 [6.76]	
03	4d	1 3/8 [34.93]	0.067 [1.70]	0.203 [5.16]	08	9d	2 5/8 [67.63]	0.099 [2.51]	0.266 [6.76]	
04	5d	1 5/8 [41.28]	0.072 [1.83]	0.219 [5.56]	09	10d	2 7/8 [73.03]	0.113 [2.87]	0.297 [7.54]	
05	6d	1 7/8 [47.63]	0.086 [2.18]	0.250 [6.35]	...	...	...	...	...

^A All dimensions are given in inches and [mm].

TABLE 7 Type I, Style 4—Broom Nails^A

NOTE 1—Carbon steel wire, flat or star head, diamond point, round smooth shank, bright finish, as specified.



F 1667 NLBM

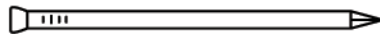
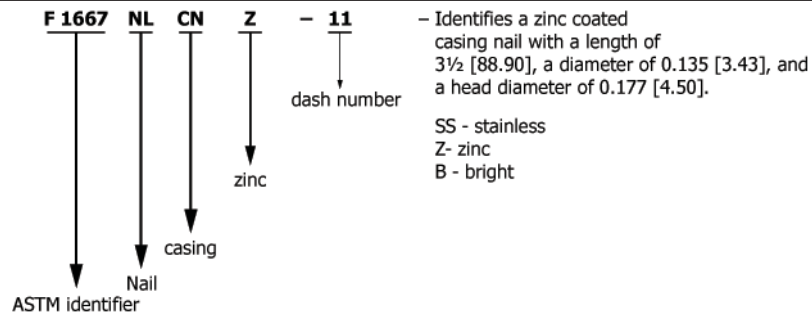
Dash No	S	L	D	H
01	2d	5/8 [15.88]	0.072 [1.83]	0.203 [5.16]
02	3d	5/8 [15.88]	0.080 [2.03]	0.219 [5.56]
03	4d	3/4 [19.05]	0.072 [1.83]	0.203 [5.16]
04	5d	3/4 [19.05]	0.080 [2.03]	0.219 [5.56]

^A All dimensions are given in inches and [mm].

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TABLE 8 Type I, Style 5—Casing Nails^A

NOTE 1—Carbon steel or stainless steel wire, flat countersunk cupped head, diamond point, round smooth shank, bright or zinc coated.



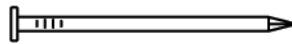
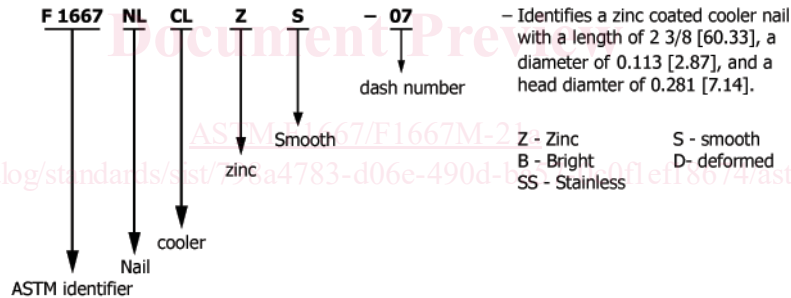
F 1667 NLCM

Dash No	S	L	D	H	Dash No	S	L	D	H	
01	2d	1	[25.40]	0.067 [1.70]	0.099 [2.51]	07	8d	2½ [63.50]	0.113 [2.87]	0.155 [3.94]
02	3d	1¼ [31.75]	0.076 [1.93]	0.113 [2.87]	08	9d	2¾ [69.85]	0.113 [2.87]	0.155 [3.94]	
03	4d	1½ [38.10]	0.080 [2.03]	0.120 [3.05]	09	10d	3 [76.20]	0.128 [3.25]	0.170 [4.32]	
04	5d	1¾ [44.45]	0.080 [2.03]	0.120 [3.05]	10	12d	3¼ [82.55]	0.128 [3.25]	0.170 [4.32]	
05	6d	2 [50.80]	0.099 [2.51]	0.142 [3.61]	11	16d	3½ [88.90]	0.135 [3.43]	0.177 [4.50]	
06	7d	2¼ [57.15]	0.099 [2.51]	0.142 [3.61]	...	...	...	...	...

^A All dimensions are given in inches and [mm].

TABLE 9 Type I, Style 6—Cooler Nails^A

NOTE 1—Carbon steel or stainless steel wire, flat head, diamond point, round smooth or deformed shank, bright or zinc or other coating as specified. When specified, coolers shall have an altered or T-head for use with mechanical drivers.



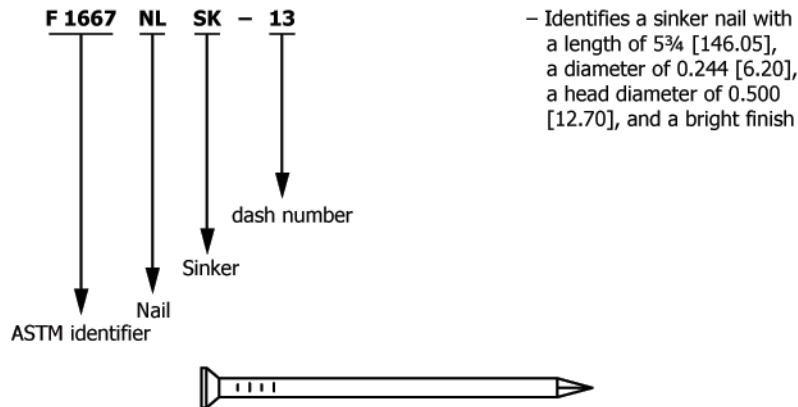
F 1667 NLCL

Dash No	S	L	D	H	Dash No	S	L	D	H	
01	2d	1	[25.40]	0.062 [1.57]	0.172 [4.37]	06	8d	2½ [63.98]	0.099 [2.51]	0.266 [6.76]
02	3d	1⅝ [28.58]	0.067 [1.70]	0.188 [4.78]	07	9d	2⅝ [60.33]	0.113 [2.87]	0.281 [7.14]	
03	4d	1¾ [34.93]	0.080 [2.03]	0.219 [5.56]	08	10d	2⅞ [66.68]	0.113 [2.87]	0.281 [7.14]	
04	5d	1⅞ [41.28]	0.086 [2.18]	0.234 [5.94]	09	12d	2⅞ [73.03]	0.120 [3.05]	0.298 [7.57]	
05	6d	1⅞ [47.63]	0.092 [2.34]	0.250 [6.35]	...	...	...	...	...

^A All dimensions are given in inches and [mm].

TABLE 10 Type I, Style 7—Sinker Nails^A

NOTE 1—Carbon steel wire, flat countersunk head, diamond point, round smooth shank, bright or other coating as specified. When specified, sinkers shall have an altered or T-head for use with power tools.

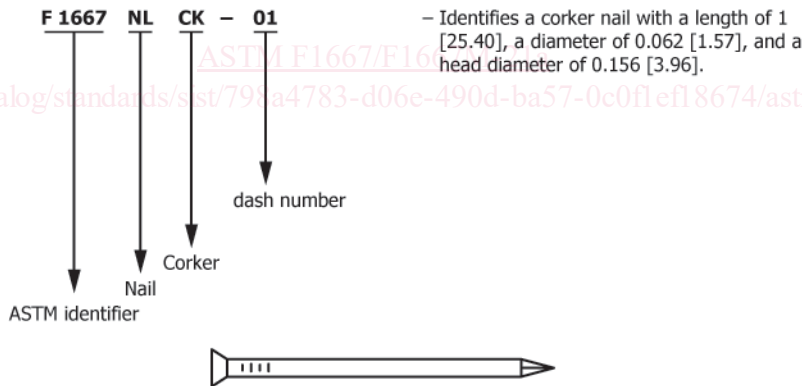


F 1667 NLSK															
Dash No	S	L		D		H		Dash No	S	L		D		H	
01	3d	1½	[28.58]	0.067	[1.70]	0.188	[4.78]	08	12d	3⅛	[79.38]	0.135	[3.43]	0.312	[7.92]
02	4d	1¾	[34.93]	0.076	[1.93]	0.219	[5.56]	09	16d	3¼	[82.55]	0.148	[3.76]	0.344	[8.74]
03	5d	1⅝	[41.28]	0.086	[2.18]	0.219	[5.56]	10	20d	3¾	[95.25]	0.177	[4.50]	0.375	[9.53]
04	6d	1⅞	[47.63]	0.092	[2.34]	0.219	[5.56]	11	30d	4¼	[107.95]	0.192	[4.88]	0.406	[10.31]
05	7d	2⅛	[53.98]	0.099	[2.51]	0.266	[6.76]	12	40d	4¾	[120.65]	0.207	[5.26]	0.438	[11.13]
06	8d	2⅜	[60.33]	0.113	[2.87]	0.266	[6.76]	13	60d	5¾	[146.05]	0.244	[6.20]	0.500	[12.70]
07	10d	2⅞	[73.03]	0.120	[3.05]	0.297	[7.54]	...	...	...	...	...	...	...	...

^A All dimensions are given in inches and [mm].

TABLE 11 Type I, Style 8—Corker Nails^A

NOTE 1—Carbon steel wire, flat countersunk head, diamond point, round smooth shank, or other coating as specified. When specified, corkers shall have an altered or T-head for use with power tools.

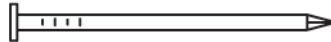
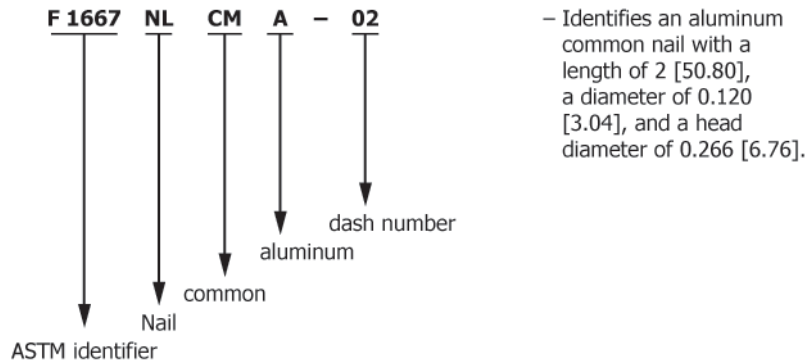


F 1667 NLCK															
Dash No	S	L		D		H		Dash No	S	L		D		H	
01	2d	1	[25.40]	0.062	[1.57]	0.156	[3.96]	09	10d	2⅞	[73.03]	0.135	[3.43]	0.312	[7.92]
02	3d	1¼	[31.75]	0.072	[1.83]	0.188	[4.78]	10	12d	3⅛	[79.38]	0.135	[3.43]	0.312	[7.92]
03	4d	1½	[38.10]	0.086	[2.18]	0.219	[5.56]	11	16d	3⅝	[85.73]	0.148	[3.76]	0.344	[8.74]
04	5d	1⅝	[41.28]	0.086	[2.18]	0.219	[5.56]	12	20d	3⅞	[98.43]	0.177	[4.50]	0.375	[9.53]
05	6d	1⅞	[47.63]	0.099	[2.51]	0.250	[6.35]	13	30d	4⅜	[111.13]	0.192	[4.88]	0.406	[10.31]
06	7d	2⅛	[53.98]	0.099	[2.51]	0.250	[6.35]	14	40d	4⅞	[123.83]	0.207	[5.26]	0.438	[11.13]
07	8d	2⅜	[60.33]	0.120	[3.05]	0.281	[7.14]	15	50d	5⅜	[136.53]	0.226	[5.74]	0.469	[11.91]
08	9d	2⅞	[66.68]	0.120	[3.05]	0.281	[7.14]	16	60d	5⅞	[149.23]	0.244	[6.20]	0.500	[12.70]

^A All dimensions are given in inches and [mm].

TABLE 12 Type I, Style 9—Aluminum Common Nails^A

NOTE 1—Aluminum alloy wire, flat head, diamond point, round smooth shank, or, when specified, square barbed shank.

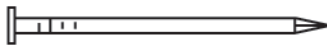
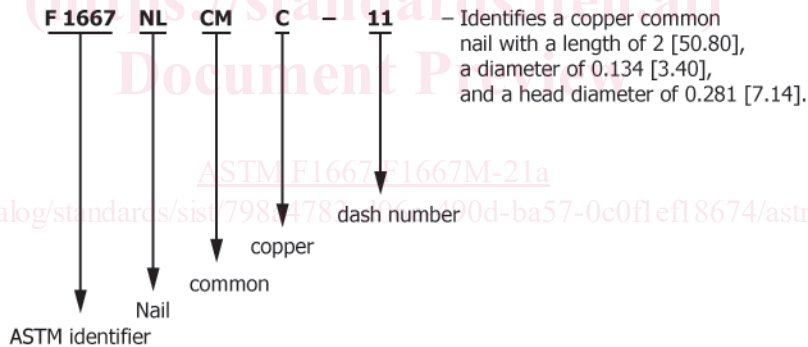


F 1667 NLCMA															
Dash No	S	L		D		H		Dash No	S	L		D		H	
01	4d	1½	[38.10]	0.099	[2.51]	0.250	[6.35]	04	10d	3	[76.20]	0.162	[4.11]	0.312	[7.92]
02	6d	2	[50.80]	0.120	[3.05]	0.266	[6.76]	05	16d	3½	[88.90]	0.177	[4.50]	0.344	[8.74]
03	8d	2½	[57.15]	0.148	[3.76]	0.281	[7.14]	06	20d	4	[101.60]	0.199	[5.05]	0.406	[10.31]

^A All dimensions are given in inches and [mm].

TABLE 13 Type I, Style 9—Copper Common Nails^A

NOTE 1—Copper wire, flat head, diamond point, round smooth shank.



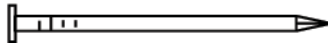
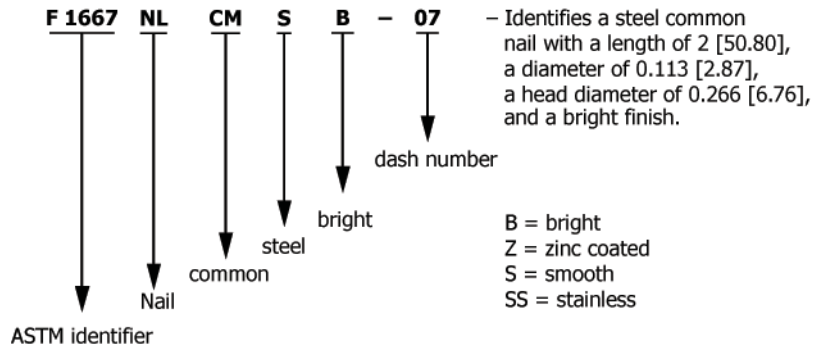
F 1667 NLCMC													
Dash No	L	D		H		Dash No	L	D		H			
01	5/8	[15.88]	0.070	[1.65]	0.156	[3.96]	10	2	[50.80]	0.120	[3.05]	0.266	[6.76]
02	3/4	[19.05]	0.065	[1.65]	0.156	[3.96]	11	2	[50.80]	0.134	[3.40]	0.281	[7.14]
03	3/4	[19.05]	0.070	[1.83]	0.172	[4.37]	12	2½	[63.50]	0.134	[3.40]	0.281	[7.14]
04	7/8	[22.23]	0.070	[1.83]	0.172	[4.37]	13	3	[76.20]	0.148	[3.76]	0.312	[7.92]
05	1	[25.40]	0.070	[1.83]	0.172	[4.37]	14	3½	[88.90]	0.165	[4.19]	0.344	[8.74]
06	1¼	[28.58]	0.080	[2.11]	0.203	[5.16]	15	4	[101.60]	0.203	[5.16]	0.406	[10.31]
07	1½	[38.10]	0.109	[2.77]	0.250	[6.35]	16	4½	[114.30]	0.220	[5.59]	0.438	[11.13]
08	1¾	[44.45]	0.109	[2.77]	0.250	[6.35]	17	5	[127.00]	0.238	[6.05]	0.469	[11.91]
09	1¾	[44.45]	0.120	[3.05]	0.266	[6.76]	18	6	[152.40]	0.284	[7.21]	0.531	[13.49]

^A All dimensions are given in inches and [mm].

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TABLE 14 Type I, Style 9—Steel Common Nails^A

NOTE 1—Carbon steel or stainless steel wire, flat head, diamond point, round smooth shank, bright, zinc coated or other coating as specified.



F 1667 NLCMS

Dash No	S	L	D		H		Dash No	S	L	D		H			
01	2d	1	[25.40]	0.072	[1.83]	0.172	[4.37]	09	10d	3	[76.20]	0.148	[3.76]	0.312	[7.92]
02	3d	1¼	[31.75]	0.080	[2.03]	0.203	[5.16]	10	12d	3¼	[82.55]	0.148	[3.76]	0.312	[7.92]
03	4d	1½	[38.10]	0.099	[2.51]	0.25	[6.35]	11	16d	3½	[88.90]	0.162	[4.11]	0.344	[8.74]
04	5d	1¾	[44.45]	0.099	[2.51]	0.25	[6.35]	12	20d	4	[101.60]	0.192	[4.88]	0.406	[10.31]
05	6d	2	[50.80]	0.113	[2.87]	0.266	[6.76]	13	30d	4½	[114.30]	0.207	[5.26]	0.438	[11.13]
06	7d	2¼	[57.15]	0.113	[2.87]	0.266	[6.76]	14	40d	5	[127.00]	0.226	[5.74]	0.469	[11.91]
07	8d	2½	[63.50]	0.131	[3.33]	0.281	[7.14]	15	50d	5½	[139.70]	0.244	[6.20]	0.500	[12.70]
08	9d	2¾	[69.85]	0.131	[3.33]	0.281	[7.14]	16	60d	6	[152.40]	0.262	[6.65]	0.531	[13.49]

^A All dimensions are given in inches and [mm].

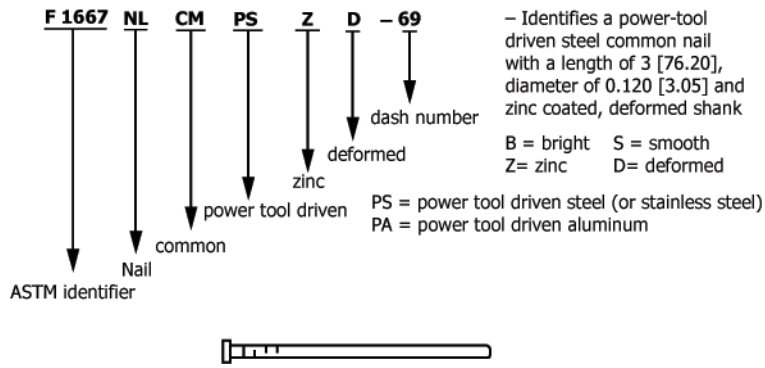
(https://standards.iteh.ai)
 Document Preview

ASTM F1667/F1667M-21a

<https://standards.iteh.ai/catalog/standards/sist/798a4783-d06e-490d-ba57-0c0f1efl8674/astm-fl667-fl667m-21a>

TABLE 15 Type I, Style 9—Power-tool Driven Common Nails^A

NOTE 1—Aluminum alloy wire, stainless steel or carbon steel wire, (bright, zinc coated or other coating as specified), round, altered or T-head, diamond or chisel point, round smooth or deformed shank, as specified. Primarily intended for use with power-tools.



F 1667 NLCMM

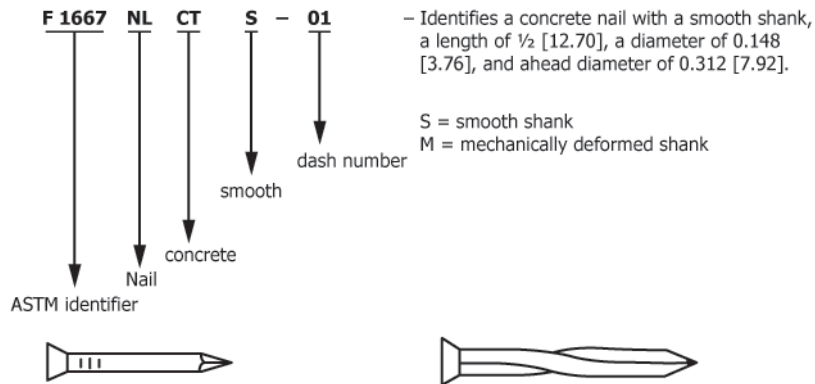
Dash No	L	D	Dash No	L	D	Dash No	L	D
01	1¼	[31.75]	0.080	[2.03]	29	2	[50.80]	0.148 [3.76]
02	1¼	[31.75]	0.086	[2.18]	30	2¼	[57.15]	0.092 [2.34]
03	1¼	[31.75]	0.092	[2.34]	31	2¼	[57.15]	0.099 [2.51]
04	1¼	[31.75]	0.099	[2.51]	32	2¼	[57.15]	0.113 [2.87]
05	1½	[38.10]	0.080	[2.03]	33	2½	[63.50]	0.092 [2.34]
06	1½	[38.10]	0.086	[2.18]	34	2½	[63.50]	0.099 [2.51]
07	1½	[38.10]	0.092	[2.34]	35	2½	[63.50]	0.113 [2.87]
08	1½	[38.10]	0.099	[2.51]	36	2½	[63.50]	0.131 [3.33]
09	1½	[38.10]	0.113	[2.87]	37	3½	[88.90]	0.131 [3.33]
10	1⅝	[41.28]	0.080	[2.03]	38	1½	[38.10]	0.120 [3.05]
11	1⅝	[41.28]	0.086	[2.18]	39	1½	[38.10]	0.131 [3.33]
12	1⅝	[41.28]	0.092	[2.34]	40	1½	[38.10]	0.148 [3.76]
13	1⅝	[41.28]	0.099	[2.51]	41	1½	[38.10]	0.162 [4.11]
14	1¾	[44.45]	0.080	[2.03]	42	1⅝	[41.28]	0.113 [2.87]
15	1¾	[44.45]	0.086	[2.18]	43	1¾	[44.45]	0.120 [3.05]
16	1¾	[44.45]	0.092	[2.34]	44	1⅞	[47.63]	0.120 [3.05]
17	1¾	[44.45]	0.099	[2.51]	45	1⅞	[47.63]	0.131 [3.33]
18	1¾	[44.45]	0.113	[2.87]	46	1⅞	[47.63]	0.148 [3.76]
19	1⅞	[47.63]	0.080	[2.03]	47	2	[50.80]	0.120 [3.05]
20	1⅞	[47.63]	0.086	[2.18]	48	2	[50.80]	0.131 [3.33]
21	1⅞	[47.63]	0.092	[2.34]	49	2⅞	[53.98]	0.099 [2.51]
22	1⅞	[47.63]	0.099	[2.51]	50	2⅞	[53.98]	0.113 [2.87]
23	1⅞	[47.63]	0.113	[2.87]	51	2⅞	[53.98]	0.120 [3.05]
24	2	[50.80]	0.080	[2.03]	52	2⅞	[53.98]	0.131 [3.33]
25	2	[50.80]	0.086	[2.18]	53	2⅞	[53.98]	0.148 [3.76]
26	2	[50.80]	0.092	[2.34]	54	2¼	[57.15]	0.120 [3.05]
27	2	[50.80]	0.099	[2.51]	55	2¼	[57.15]	0.131 [3.33]
28	2	[50.80]	0.113	[2.87]	56	2¼	[57.15]	0.148 [3.76]
57	2⅝	[60.33]	0.113	[2.87]	57	2⅝	[60.33]	0.120 [3.05]
58	2⅝	[60.33]	0.120	[3.05]	58	2⅝	[60.33]	0.131 [3.33]
59	2⅝	[60.33]	0.131	[3.33]	59	2⅝	[60.33]	0.148 [3.76]
60	2⅝	[60.33]	0.148	[3.76]	60	2⅝	[60.33]	0.120 [3.05]
61	2½	[63.50]	0.120	[3.05]	61	2½	[63.50]	0.148 [3.76]
62	2½	[63.50]	0.148	[3.76]	62	2½	[63.50]	0.162 [4.11]
63	2½	[63.50]	0.162	[4.11]	63	2½	[63.50]	0.148 [3.76]
64	2⅞	[66.68]	0.148	[3.76]	64	2⅞	[66.68]	0.120 [3.05]
65	2¾	[69.85]	0.120	[3.05]	65	2¾	[69.85]	0.131 [3.33]
66	2¾	[69.85]	0.131	[3.33]	66	2¾	[69.85]	0.148 [3.76]
67	2¾	[69.85]	0.148	[3.76]	67	2¾	[69.85]	0.120 [3.05]
68	2⅞	[73.03]	0.120	[3.05]	68	2⅞	[73.03]	0.120 [3.05]
69	3	[76.20]	0.120	[3.05]	69	3	[76.20]	0.128 [3.25]
70	3	[76.20]	0.128	[3.25]	70	3	[76.20]	0.131 [3.33]
71	3	[76.20]	0.131	[3.33]	71	3	[76.20]	0.148 [3.76]
72	3	[76.20]	0.148	[3.76]	72	3	[76.20]	0.120 [3.05]
73	3¼	[82.55]	0.120	[3.05]	73	3¼	[82.55]	0.131 [3.33]
74	3¼	[82.55]	0.131	[3.33]	74	3¼	[82.55]	0.148 [3.76]
75	3¼	[82.55]	0.148	[3.76]	75	3¼	[82.55]	0.135 [3.43]
76	3½	[88.90]	0.135	[3.43]	76	3½	[88.90]	0.148 [3.76]
77	3½	[88.90]	0.148	[3.76]	77	3½	[88.90]	0.162 [4.11]
78	3½	[88.90]	0.162	[4.11]	78	3½	[88.90]	0.148 [3.76]
79	4	[101.60]	0.148	[3.76]	79	4	[101.60]	0.162 [4.11]
80	4	[101.60]	0.162	[4.11]	80	4	[101.60]	0.148 [3.76]
81	4½	[114.30]	0.148	[3.76]	81	4½	[114.30]	0.162 [4.11]
82	4½	[114.30]	0.162	[4.11]	82	4½	[114.30]	...
...
...

^A All dimensions are given in inches and [mm].

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TABLE 16 Type I, Style 10—Concrete Nails^A

NOTE 1—Hardened steel, flat countersunk head, diamond point, smooth or mechanically deformed shank formed from round or square stock, as specified, bright finish.



F 1667 NLCTS

Dash No	L	D	H
01	½ [12.70]	0.148 [3.76]	0.312 [7.92]
02	⅝ [15.88]	0.148 [3.76]	0.312 [7.92]
03	¾ [19.05]	0.148 [3.76]	0.312 [7.92]
04	⅞ [22.23]	0.148 [3.76]	0.312 [7.92]
05	1 [25.40]	0.148 [3.76]	0.312 [7.92]

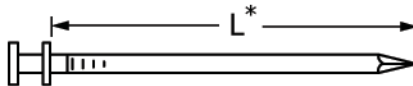
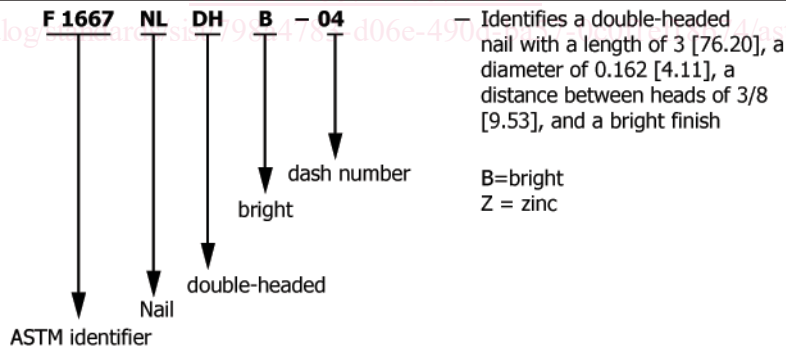
F 1667 NLCTM

Dash No	L	D	H	Dash No	L	D	H
01	¾ [19.05]	0.181 [4.60]	0.284 [7.21]	05	2 [50.80]	0.181 [4.60]	0.284 [7.21]
02	1 [25.40]	0.181 [4.60]	0.284 [7.21]	06	2½ [63.50]	0.181 [4.60]	0.284 [7.21]
03	1½ [38.10]	0.181 [4.60]	0.284 [7.21]	07	2¾ [69.85]	0.181 [4.60]	0.284 [7.21]
04	1¾ [44.45]	0.181 [4.60]	0.284 [7.21]	08	3 [76.20]	0.181 [4.60]	0.284 [7.21]

^A All dimensions are given in inches and [mm].

TABLE 17 Type I, Style 11—Double-Headed Nails (Duplex)^A

NOTE 1—Carbon steel wire, flat heads, diamond point, round smooth shank, bright finish or zinc coated.



F 1667 NLDH

Dash No	S	L	D	B	Dash No	S	L	D	B
01	6d	1¾ [44.45]	0.113 [2.87]	¼ [6.35]	04	16d	3 [76.20]	0.162 [4.11]	⅝ [9.53]
02	8d	2¼ [57.15]	0.131 [3.33]	¼ [6.35]	05	20d	3½ [82.55]	0.192 [4.88]	⅝ [9.53]
03	10d	2¾ [69.85]	0.148 [3.76]	⅝ [7.94]	06	30d	4 [101.60]	0.207 [5.26]	⅞ [11.11]

^A All dimensions are given in inches and [mm].