



Designation: ~~F1667~~—~~20~~ F1667 – 21

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

This standard is issued under the fixed designation F1667; 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 3–65:3–64](#).

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 The values stated in inch-pound units are to be regarded as standard. No other units of measurement are included in this standard.

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.*

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 Board³](#)

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. Current edition approved Dec. 15, 2020/June 1, 2021. Published February 2021/June 2021. Originally approved in 1995. Last previous edition approved in 2018/2020 as ~~F1667—18a~~F1667 – 20. DOI: ~~10.1520/F1667-20.10.1520/F1667-21~~.

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 ~~Gypsum board~~ Gypsum board are addressed in [C514](#).

*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. Sinkers	SK	10
	8. Corker	CK	11
	9. Aluminum	CMA	12
	Common		
	Copper	CMC	13
	Common		
	Steel	CMS	14
	Common		
	Power-tool	CMP	15
	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 Slub	MRST	23	
16. Pallet	PL	24	
17. Gypsum wallboard	GWS	25	
Gypsum wallboard	GWM	26	
Gypsum wallboard	GWM	26	
18. Aluminum	RFA	27	
Roofing			
Aluminum	RFA	27	
Roofing			
Steel	RFS	28	
Roofing			
Steel	RFS	28	
Roofing			
Copper-Clad	RFG	29	
Roofing			
Copper-Clad	RFC	29	
Roofing			
Umbrella	RFL	30	
Head			
Roofing			
Umbrella	RFL	30	
Head			
Roofing			
Steel	RFR	31	
Reinforced			
Roofing			
Steel	RFR	31	
Reinforced			
Roofing			
Cap Nail	MRH/PRH	32	
Hand-Driven			
Roofing			
Cap Nail	MRH/PRH	32	
Hand-Driven			
Roofing			
Cap Nail	MRP/PRP	33	
Power-Tool Driven			
Roofing			
Cap Nail	MRP/PRP	33	
Power-Tool Driven			
Roofing			
Washed	RFNS/RFND	34	
Aluminum			
Roofing			
Washed	RFNS/RFND	34	
Aluminum			
Roofing			

TABLE 1 Continued

Type	Style	Style Identification	Table
	Washed	RFE	34
	Steel		
	Roofing		
	Washed	RFE	35
	Steel		
	Roofing		
19. Shingle		SHAD/SHAS	35
19. Shingle		SHAD/SHAS	36
Steel-Shingle		SHSS/SHSR	36
Steel Shingle		SHSS/SHSR	37
20. Siding		SDF/SDG/SDK	37
20. Siding		SDF/SDC/SDK	38
21. Slating		SLA/SLG/SLS	38
21. Slating		SLA/SLC/SLS	39
22. Rubber-heel		RH	39
22. Rubber heel		RH	40
23. Underlayment		UL	40
23. Underlayment		UL	41
24. Square-barbed		SB	41
24. Square-barbed		SB	42
25. Masonry drive		MD	42
25. Masonry drive		MD	43
26. Escutcheon		ES	43
26. Escutcheon		ES	44
27. Glulam rivet		GR	44
27. Glulam rivet		GR	45
28. Post frame		PFRS	45
Ring Shank			
28. Post frame		PFRS	46
Ring Shank			
Roof Sheathing Ring		RSRS	46
Shank			
Roof Sheathing Ring		RSRS	47
Shank			
Standard Ring-Shank		SRS	47
Standard Ring-Shank		SRS	48
29. Metal		MHS/MHR	48
Hardware			
Nails			
29. Metal		MHS/MHR	49
Hardware			
Nails			
I—Cut nails (GN)			
1. Common		CM	49
II—Cut nails (CN)			
1. Common		CM	50
2. Basket		BK	50
2. Basket		BK	51
3. Clout		CL	51
3. Clout		CL	52
III—Spikes (SP)			
1. Common		CM	52
II—Spikes (SP)			
1. Common		CM	53
2. Gutter		GRF/GRO	53
2. Gutter		GRF/GRO	54
3. Round		RDC/RDF	54
3. Round		RDC/RDF	55
IV—Staples (ST)			
1. Fence		FN	55
IV—Staples (ST)			
1. Fence		FN	56
2. Poultry netting		PN	56
2. Poultry netting		PN	57
3. Flat top crown		FG	57
3. Flat top crown		FC	58
Flat top crown		FGG	58
Flat top crown		FCC	59
4. Round or V crown		RC	59
4. Round or V crown		RC	60
5. Preformed		PG	60
5. Preformed		PC	61
6. Electrical		RE	61
6. Electrical		RE	62
7. Preformed hoop		PH	62

TABLE 1 *Continued*

Type	Style	Style Identification	Table
	7. Preformed hoop	PH	63
	8. Gap	STC	63
	8. Cap	STC	64

**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

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

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

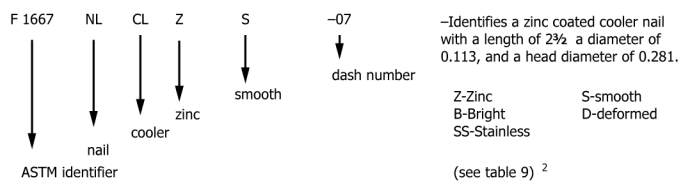
3. Terminology

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](#).

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 3–62, 3–64, 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 3–473–49 wherever it applies.

5. Ordering Information

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

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

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

- 5.1.1 Quantity or weight;
- 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.

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.
- 7.3 *Number per pound*—Number per pound figures are not requirements. Number per pound varies (1) as actual dimensions vary

within tolerance ranges, (2) between bright and coated nails, and (3) with zinc coating thickness for galvanized nails. No tolerances have been established for these figures. They are for reference only and shall not be used as product acceptance/rejection criteria.

8. Dimensions and Tolerances

8.1 Nominal dimensions of nails and spikes shall be as shown in Tables 3–53, 3–55. The following dimensional designations shall apply:

<i>S</i>	= trade designation (reference in penny weight),
<i>L</i>	= length, in.,
<i>H</i>	= head diameter or width, in.,
<i>D</i>	= shank diameter, in.,
<i>D</i>*	= shank diameter, in., measured shank diameter, in. (Tables 45-47)
<u><i>D</i>*</u>	= <u>shank diameter, in., measured shank diameter, in. (Tables 46-48)</u>
<i>H</i>	= Measured crest diameter of deformed portion of nail shank, in., (Tables 45-47)
<u><i>H</i></u>	= <u>Measured crest diameter of deformed portion of nail shank, in., (Tables 46-48)</u>
<i>H-D</i>*	= Measured crest diameter minus the measured shank diameter, in. (Tables 45-47)
<u><i>H-D</i>*</u>	= <u>Measured crest diameter minus the measured shank diameter, in. (Tables 46-48)</u>
<i>FL</i>	= Length of threaded section of nail shank, in. (Tables 45-47)
<u><i>FL</i></u>	= <u>Length of threaded section of nail shank, in. (Tables 46-48)</u>
<i>P</i>	= Pitch or spacing of rings on a ring-shank nail, in., (Tables 45-47)
<u><i>P</i></u>	= <u>Pitch or spacing of rings on a ring-shank nail, in., (Tables 46-48)</u>
<i>B</i>	= head separation, in. (Table 17), and
<i>No./lb</i>	= approximate count per pound.

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 $\pm 1/32$ in. for lengths up to and including 1 in.; $\pm 1/16$ in. for lengths over 1 in., up to and including 2 1/2 in.; $\pm 3/32$ for lengths over 2 1/2 in., up to and including 7 in.; and $\pm 1/8$ in. for all lengths over 7 in. 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 ± 0.002 in. for diameters smaller than 0.076 in. and ± 0.004 in. for diameters 0.076 in. 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, 55–64, and the following dimensional designations shall apply:

8.3.1 Hand Tool–Driven Nominal Dimensions:

<i>L</i>	= leg length, inside, in.,
<i>D</i>	= round leg diameter, in.,

C = crown width, inside, in., and
No./lb = approximate count per pound.

8.3.2 Power Tool–Driven Nominal Dimensions:

D = round leg diameter, in.,
 L = leg length, outside, in.,
 F = leg thickness, in. (see Tables 57 and 58),
 T = leg thickness, in. (see Tables 58 and 59),
 W = leg width, in. (see Tables 57 and 58),
 \underline{W} = leg width, in. (see Tables 58 and 59),
 C = crown width, outside, in., and
 G = steel wire gage.

8.4 Tolerances on Nominal Dimensions for Staples:

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

8.4.2 Diameter tolerances for hand tool–driven round staples shall be ± 0.002 in. for diameters smaller than 0.076 in. and ± 0.004 in. for diameters 0.076 in. and larger.

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, 58, and 59) shall apply.

8.4.4 Crown width tolerances are $\pm 1/32$ in. 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, 51–52 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 4.)

NOTE 4—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 5.)

NOTE 5—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 or electrogalvanized 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 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** section 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 6—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 **5758** or Table **5859**) shall apply.

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

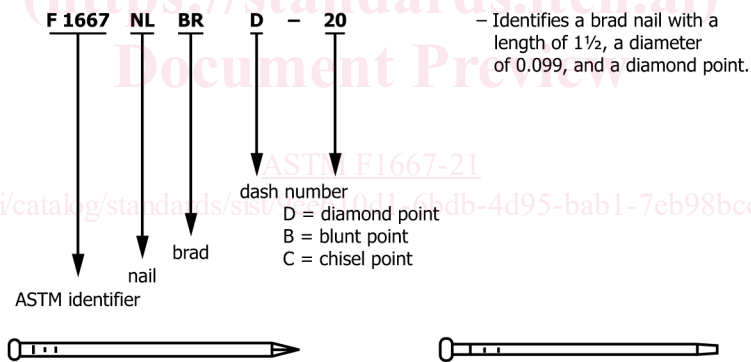
Table 1), fastener length, diameter (or gage, as applicable) material (other than carbon steel), coating/finish, for nails-shank style (smooth, ring, screw, etc.), for staples –crown width, the name of the manufacturer or distributor, country of origin, and the quantity or net weight.

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.

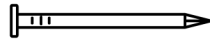
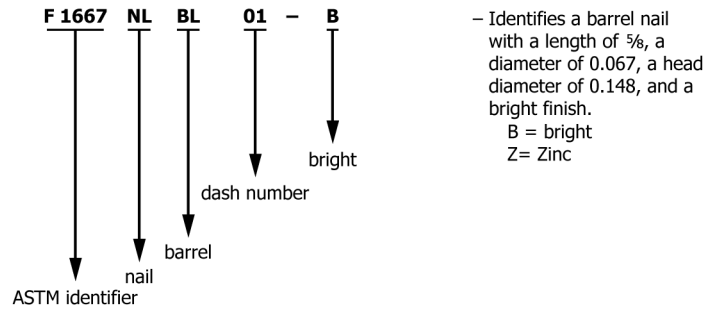


Dash No.	L	D	S	No./lb	Dash No.	L	D	S	No./lb
01	3/8	0.035	...	9520	21	1 3/4	0.062	...	670
02	1/2	0.035	...	7060	22	1 3/4	0.080	...	400
03	1/2	0.048	...	3990	23	1 3/4	0.099	5d	270
04	5/8	0.035	...	5680	24	2	0.062	...	580
05	5/8	0.048	...	3200	25	2	0.080	...	350
06	3/4	0.035	...	4800	26	2	0.113	6d	180
07	3/4	0.048	...	2620	27	2 1/4	0.080	...	320
08	3/4	0.062	...	1550	28	2 1/4	0.113	7d	160
09	7/8	0.035	...	4220	29	2 1/2	0.080	...	290
10	7/8	0.048	...	2220	30	2 1/2	0.131	8d	110
11	7/8	0.062	...	1280	31	2 3/4	0.131	9d	97
12	1	0.054	...	1500	32	3	0.148	10d	70
13	1	0.062	...	1120	33	3 1/4	0.148	12d	65
14	1	0.072	...	904	34	3 1/2	0.162	16d	50
15	1 1/4	0.054	...	1210	35	4	0.192	20d	31
16	1 1/4	0.062	...	940	36	4 1/2	0.207	30d	24
17	1 1/4	0.080	3d	560	37	5	0.225	40d	18
18	1 1/2	0.054	...	1040	38	5 1/2	0.244	50d	14
19	1 1/2	0.080	...	470	39	6	0.262	60d	11
20	1 1/2	0.099	4d	320	...	...	...	...	...

^AAll dimensions are given in inches.

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.

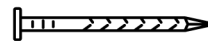
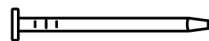
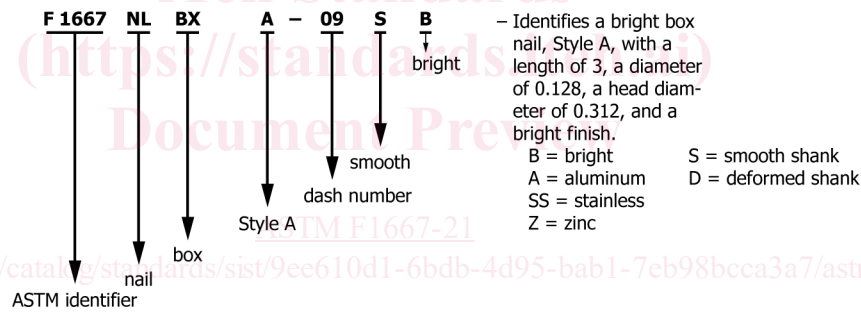


Dash No.	L	D	H	No./lb	Dash No.	L	D	H	No./lb
01	5/8	0.067	0.148	1.550	05	1 1/8	0.076	0.177	670
02	3/4	0.067	0.148	1.300	06	1 1/4	0.080	0.188	540
03	7/8	0.076	0.177	850	07	1 3/8	0.092	0.219	380
04	1	0.076	0.177	750	08	1 1/2	0.092	0.219	350

^AAll dimensions are given in inches.

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.

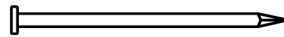
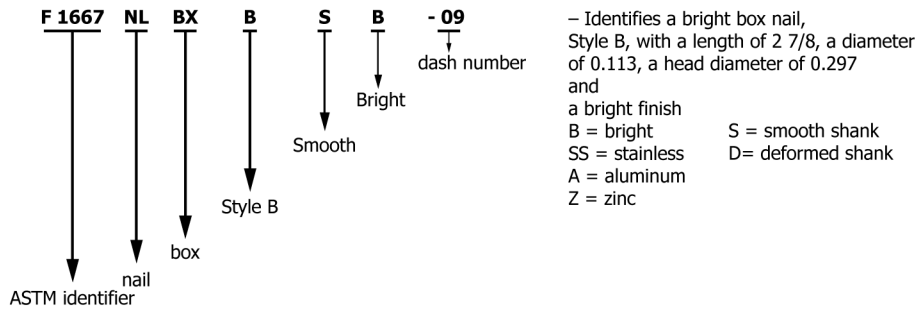


F 1667 NLBXA											
Dash No.	S	L	D	H	No./lb	Dash No.	S	L	D	H	No./lb
01	2d	1	0.067	0.188	940	08	9d	2 3/4	0.113	0.297	120
02	3d	1 1/4	0.076	0.219	590	09	10d	3	0.128	0.312	90
03	4d	1 1/2	0.080	0.219	450	10	12d	3 1/4	0.128	0.312	83
04	5d	1 3/4	0.080	0.219	390	11	16d	3 1/2	0.135	0.344	69
05	6d	2	0.099	0.266	220	12	20d	4	0.148	0.375	50
06	7d	2 1/4	0.099	0.266	200	13	30d	4 1/2	0.148	0.375	45
07	8d	2 1/2	0.113	0.297	140	14	40d	5	0.162	0.406	34

^AAll dimensions are given in inches.

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.

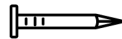
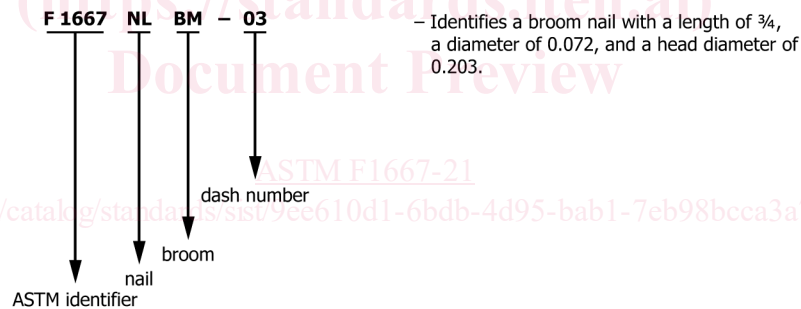


F 1667 NLBxB											
Dash No.	S	L	D	H	No./lb	Dash No.	S	L	D	H	No./lb
01	2d	1	0.058	0.172	1250	06	7d	2 1/8	0.086	0.250	280
02	3d	1 1/8	0.062	0.188	980	07	8d	2 3/8	0.099	0.266	190
03	4d	1 3/8	0.067	0.203	680	08	9d	2 5/8	0.099	0.266	170
04	5d	1 5/8	0.072	0.219	510	09	10d	2 7/8	0.113	0.297	120
05	6d	1 7/8	0.086	0.250	315	...	...	...	...	...	...

^AAll dimensions are given in inches.

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.

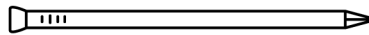
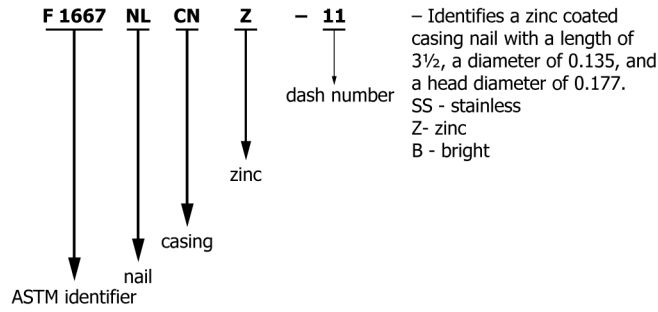


Dash No.	L	D	H	No./lb
01	5/8	0.072	0.203	1480
02	5/8	0.080	0.219	990
03	3/4	0.072	0.203	1170
04	3/4	0.080	0.219	840

^AAll dimensions are given in inches.

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.

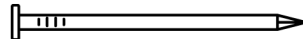
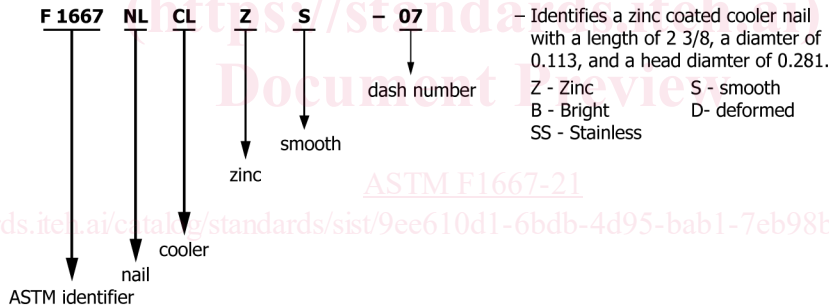


Dash No.	S	L	D	H	No./lb	Dash No.	S	L	D	H	No./lb
01	2d	1	0.067	0.099	1090	07	8d	2½	0.113	0.155	150
02	3d	1¼	0.076	0.113	650	08	9d	2¾	0.113	0.155	135
03	4d	1½	0.080	0.120	490	09	10d	3	0.128	0.170	95
04	5d	1¾	0.080	0.120	415	10	12d	3¼	0.128	0.170	90
05	6d	2	0.099	0.142	245	11	16d	3½	0.135	0.177	75
06	7d	2¼	0.099	0.142	215	...	...	...	...	...	...

^AAll dimensions are given in inches.

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.

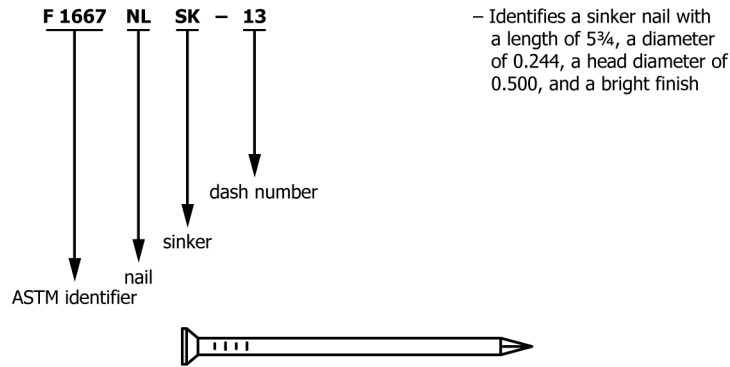


Dash No.	S	L	D	H	No./lb	Dash No.	S	L	D	H	No./lb
01	2d	1	0.062	0.172	1110	06	7d	2⅞	0.099	0.266	210
02	3d	1⅞	0.067	0.188	840	07	8d	2⅞	0.113	0.281	140
03	4d	1⅝	0.080	0.219	490	08	9d	2⅞	0.113	0.281	130
04	5d	1⅝	0.086	0.234	370	09	10d	2⅞	0.120	0.297	100
05	6d	1⅞	0.092	0.250	280	...	...	...	...	...	...

^AAll dimensions are given in inches.

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.

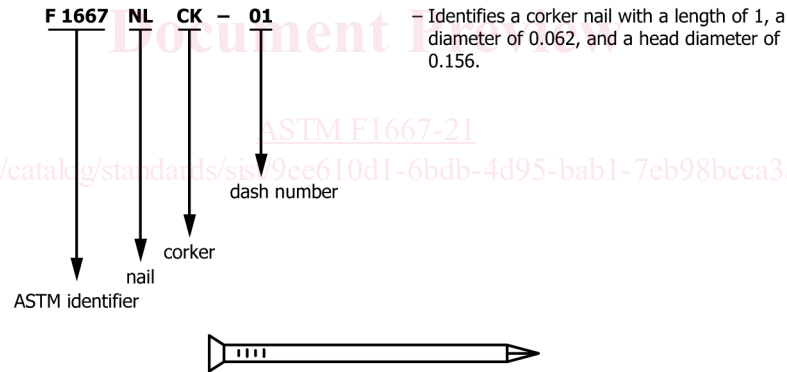


Dash No.	S	L	D	H	No./lb	Dash No.	S	L	D	H	No./lb
01	3d	1⅞	0.067	0.172	940	08	12d	3⅞	0.135	0.312	81
02	4d	1¾	0.080	0.203	530	09	16d	3¼	0.148	0.344	64
03	5d	1⅝	0.086	0.219	390	10	20d	3¾	0.177	0.375	40
04	6d	1⅞	0.092	0.234	290	11	30d	4¼	0.192	0.406	30
05	7d	2⅞	0.099	0.250	220	12	40d	4¾	0.207	0.438	23
06	8d	2¾	0.113	0.266	150	13	60d	5¾	0.244	0.500	14
07	10d	2⅞	0.120	0.281	110	...	...	...	...	...	...

^AAll dimensions are given in inches.

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.

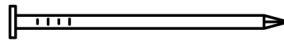
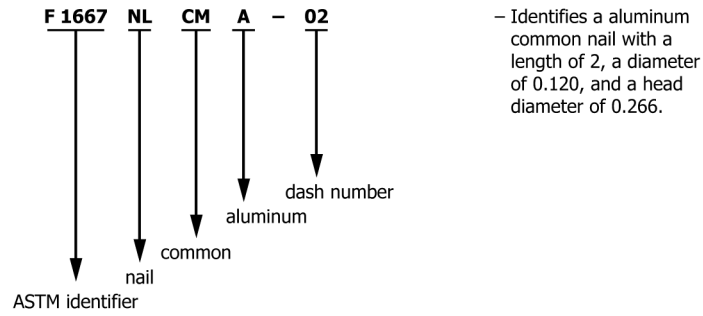


Dash No.	S	L	D	H	No./lb	Dash No.	S	L	D	H	No./lb
01	2d	1	0.062	0.156	1220	09	10d	2⅞	0.135	0.312	89
02	3d	1¼	0.072	0.188	720	10	12d	3⅞	0.135	0.312	81
03	4d	1½	0.086	0.219	420	11	16d	3⅞	0.148	0.344	62
04	5d	1⅝	0.086	0.219	320	12	20d	3⅞	0.177	0.375	38
05	6d	1⅞	0.099	0.250	250	13	30d	4¾	0.192	0.406	29
06	7d	2⅞	0.099	0.250	220	14	40d	4⅞	0.207	0.438	22
07	8d	2¾	0.120	0.281	130	15	50d	5¾	0.226	0.469	17
08	9d	2⅞	0.120	0.281	120	16	60d	5⅞	0.244	0.500	13

^AAll dimensions are given in inches.

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.

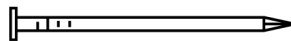
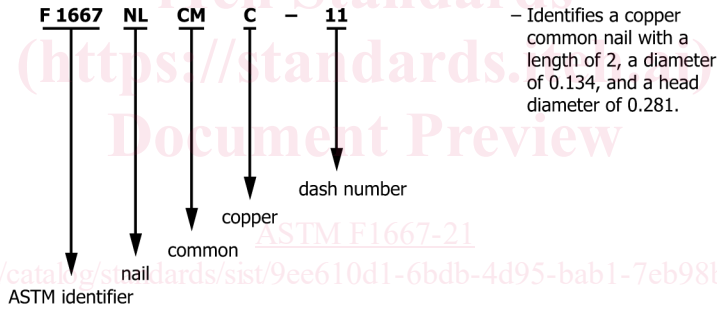


F 1667 NLCMA											
Dash No.	S	L	D	H	No./lb	Dash No.	S	L	D	H	No./lb
01	4d	1½	0.099	0.250	830	04	10d	3	0.162	0.312	170
02	6d	2	0.120	0.266	430	05	16d	3½	0.177	0.344	120
03	8d	2½	0.148	0.281	220	06	20d	4	0.199	0.406	78

^AAll dimensions are given in inches.

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

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

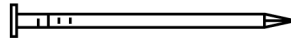
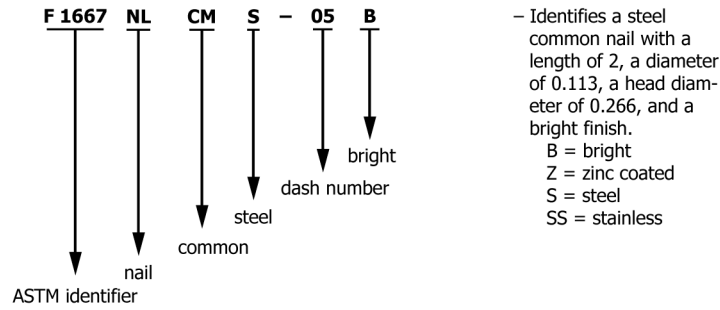


F 1667 NLCMC									
Dash No.	L	D	H	No./lb	Dash No.	L	D	H	No./lb
01	5/8	0.065	0.156	1380	10	2	0.120	0.266	130
02	3/4	0.065	0.156	1160	11	2	0.134	0.281	...
03	3/4	0.072	0.172	960	12	2½	0.134	0.281	86
04	7/8	0.072	0.172	810	13	3	0.148	0.312	56
05	1	0.072	0.172	700	14	3½	0.165	0.344	40
06	1¼	0.083	0.203	420	15	4	0.203	0.406	23
07	1½	0.109	0.250	210	16	4½	0.220	0.438	18
08	1¾	0.109	0.250	180	17	5	0.238	0.469	14
09	1¾	0.120	0.266	140	18	6	0.284	0.531	8

^AAll dimensions are given in inches.

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.

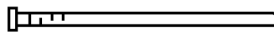
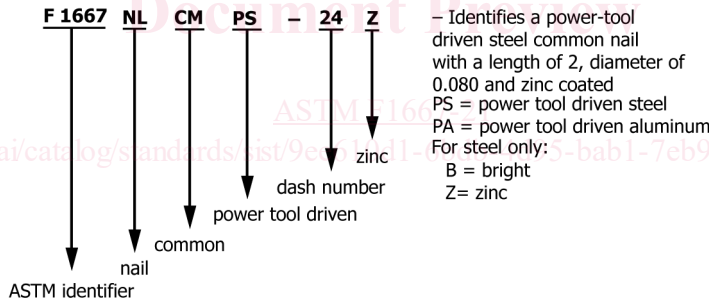


F 1667 NLCMS											
Dash No.	S	L	D	H	No./lb	Dash No.	S	L	D	H	No./lb
01	2d	1	0.072	0.172	850	09	10d	3	0.148	0.312	66
02	3d	1¼	0.080	0.203	540	10	12d	3¼	0.148	0.312	61
03	4d	1½	0.099	0.250	290	11	16d	3½	0.162	0.344	47
04	5d	1¾	0.099	0.250	250	12	20d	4	0.192	0.406	30
05	6d	2	0.113	0.266	170	13	30d	4½	0.207	0.438	23
06	7d	2¼	0.113	0.266	150	14	40d	5	0.226	0.469	17
07	8d	2½	0.131	0.281	100	15	50d	5½	0.244	0.500	14
08	9d	2¾	0.131	0.281	92	16	60d	6	0.262	0.531	11

^AAll dimensions are given in inches.

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.

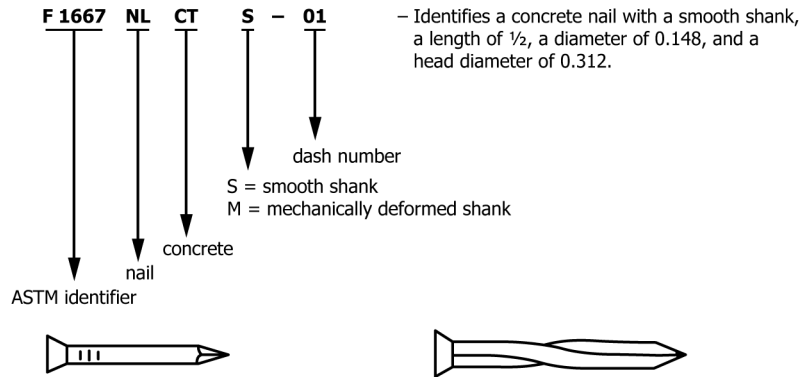


F1667 NLCMM																	
Dash No.	L	D	Dash No.	L	D	Dash No.	L	D	Dash No.	L	D	Dash No.	L	D	Dash No.	L	D
01	1¼	0.080	15	1¾	0.086	29	2	0.148	43	1¼	0.120	57	2⅝	0.113	71	3	0.131
02	1¼	0.086	16	1¾	0.092	30	2¼	0.092	44	1⅞	0.120	58	2⅝	0.120	72	3	0.148
03	1¼	0.092	17	1¾	0.099	31	2¼	0.099	45	1⅞	0.131	59	2⅝	0.131	73	3¼	0.120
04	1¼	0.099	18	1¾	0.113	32	2¼	0.113	46	1⅞	0.148	60	2⅝	0.148	74	3¼	0.131
05	1½	0.080	19	1⅞	0.080	33	2½	0.092	47	2	0.120	61	2½	0.120	75	3¼	0.148
06	1½	0.086	20	1⅞	0.086	34	2½	0.099	48	2	0.131	62	2½	0.148	76	3½	0.135
07	1½	0.092	21	1⅞	0.092	35	2½	0.113	49	2⅞	0.099	63	2½	0.162	77	3½	0.148
08	1½	0.099	22	1⅞	0.099	36	2½	0.131	50	2⅞	0.113	64	2⅝	0.148	78	3½	0.162
09	1½	0.113	23	1⅞	0.113	37	3½	0.131	51	2⅞	0.120	65	2¾	0.120	79	4	0.148
10	1⅝	0.080	24	2	0.080	38	1½	0.120	52	2⅞	0.131	66	2¾	0.131	80	4	0.162
11	1⅝	0.086	25	2	0.086	39	1½	0.131	53	2⅞	0.148	67	2¾	0.148	81	4½	0.148
12	1⅝	0.092	26	2	0.092	40	1½	0.148	54	2¼	0.120	68	2⅞	0.120	82	4½	0.162
13	1⅝	0.099	27	2	0.099	41	1½	0.162	55	2¼	0.131	69	3	0.120	...	...	...
14	1¾	0.080	28	2	0.113	42	1⅞	0.113	56	2¼	0.148	70	3	0.128	...	...	...

^A All dimensions given in inches.

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.



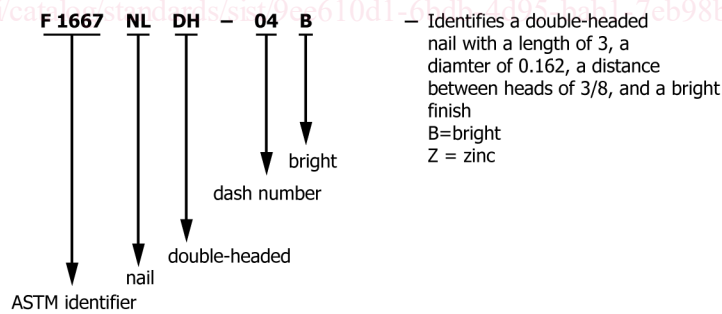
F 1667 NLCTS				
Dash No.	L	D	H	No./lb
01	1/2	0.148	0.312	450
02	5/8	0.148	0.312	350
03	3/4	0.148	0.312	290
04	7/8	0.148	0.312	250
05	1	0.148	0.312	210

F 1667 NLCTM									
Dash No.	L	D	H	No./lb	Dash No.	L	D	H	No./lb
01	3/4	0.181	0.284	240	05	2	0.181	0.284	93
02	1	0.181	0.284	204	06	2 1/2	0.181	0.284	68
03	1 1/2	0.181	0.284	116	07	2 3/4	0.181	0.284	60
04	1 3/4	0.181	0.284	112	08	3	0.181	0.284	52

^AAll dimensions are given in inches.

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.



Dash No.	S	L	D	B	No./lb	Dash No.	S	L	D	B	No./lb
01	6d	1 3/4	0.113	1/4	160	04	16d	3	0.162	3/8	45
02	8d	2 1/4	0.131	1/4	90	05	20d	3 1/2	0.192	3/8	28
03	10d	2 3/4	0.148	5/16	59	06	30d	4	0.207	7/16	22

^AAll dimensions are given in inches.