

Designation: F1667 - 18a F1667 - 20

# Standard Specification for Driven Fasteners: Nails, Spikes, and Staples<sup>1</sup>

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 ( $\epsilon$ ) 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.

- 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:<sup>2</sup>

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<sup>3</sup>

F547 Terminology of Nails for Use with Wood and Wood-Base Materials

<sup>&</sup>lt;sup>1</sup> 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. 1, 2018 Dec. 15, 2020. Published December 2018 February 2021. Originally approved in 1995. Last previous edition approved in 2018 as F1667 – 18a. DOI: 10.1520/F1667-18A:10.1520/F1667-20.

<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.

<sup>&</sup>lt;sup>3</sup> Additional material and dimensional tolerance for nails used in Gypsumboard are addressed in C514.



TABLE 1 Classification and Identification Index

Type						<u>.</u>	
2. Barrel   8L   4   4   8   8   8   8   8   8   8   8	Type		Style	Style Identification	Table	_	
2. Barrel   SL   4   4   3   80x A   5   80x B   8XA   5   6   8XB   6   6   8   8   8   8   8   8   8   8	I—Nails (NL)	1.	Brads	BR	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   CMP   15   Driven   Common   10   Concrete   CTS/CTM   16   11   Double-headed   DH   17   (Duplex)   12   Finish   FH   18   13   Flooring   FL   19   14   Lath   LHF   20   Lath   LHH   21   15   Masonry   MF/MRH   22   16   Pallet   L9   17   Gypsum wallboard   GWS   24   Gypsum wallboard   GWS   24   Gypsum wallboard   GWS   24   Gypsum wallboard   GWM   25   18   Aluminum   RFA   26   Roofing   RFS   GS   7   Roofing   RFC   28   Roofing   RFC   28   Roofing   RFC   28   Roofing   RFC   30   Reinforced   Roofing   RFC   30   Roofing   Washered   RFC   31   Roofing   Steel   RFC   31   Roofing   Steel   RFC   32   Roofing   Steel   RFC   34   Roofing   Steel   RFC   34   Roofing   Steel   RFC   34   Roofing   Steel   RFC   35   Roofing   Steel   RFC   34   Roofing   Steel   RFC   35   Roofing   Steel   RFC   34   Roofing   Shapk   Shapk   35   Roofing   Shapk   Shapk   36   Roofing   Shapk   Shapk   36   Roofing   Shapk   Shapk   37   Roofing   Shapk   RRS   47   Roofing   Shapk   RRS   47   Roofing   Shapk   Shap	,			BL			
Box B							
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   CMC   13     Common   CMS   14     Common   CMP   15     Driven   Common   CMP   15     Driven   Common   CMP   17     Driven   Common   CMP   Driven   Common     10. Concrete   CTS/CTM   16     11. Double-headed   DH   17     (Duplex)   Common   CTS/CTM   16     12. Finish   FH   18     13. Flooring   FL   19     14. Lath   LHF   20     Lath   LHH   21     15. Masonry   MF/MRH   22     16. Pallet   L9     17. Gypsum wallboard   GWS   24     Gypsum wallboard   GWS   25     Gypsum							
5. Casing   CN		4.					
6. Cooler CL 9 7. Sinker SK 10 8. Corker CK 11 9. Aluminum CMA 12 Common CDAP 13 Common Steel CMB 14 Common Power-tool CMP 15 Driven Common 10. Concrete CTS/CTM 16 11. Double-headed DH 17 (Duplex) 12. Finish FH 18 13. Flooring FL 19 14. Lath LHF 20 Lath LHH 21 15. Masonry MR/MRH 22 16. Pallet PL 23 17. Gypsum wallboard GWM 25 18. Aluminum RFA 26 Roofing GWM 25 Roofing RFC 28 Roofing RFC 29 Roofing RFC 29 Roofing RFC 30 Roofing RFC 31 Roofing RFC 30 Roofing RFC 30 Roofing RFC 31 Roofing RFC 31 Roofing RFC 32 Roofing RFC 33 Reinforced Roofing RFC 34 Roofing RFC 35 Roofing RFC 36 Roofing RFC 36 Roofing RFC 36 Roofing RFC 36 Roofing RFC 37 Roofing RFC 36 Roofing SFC 37 Roofing RFC 36 Roofing SFC 38 Reinforced RFC 36 Roofing RFC 36 Roof							
7. Sinker Sk 10 8. Corker Ck 11 9. Aluminum CMA 12 Common Copper CMC 13 Common Steel CMS 14 Common Steel CMP 15 Driven Common 10. Concrete CTS/CTM 16 11. Double-headed DH 17 (Duplex) 12. Finish FH 18 13. Flooring FL 19 14. Lath LHF 20 Lath LHH 21 15. Masonry MR/MRH 22 16. Pallet PL 23 17. Gypsum wallboard GWS 24 Gypsum wallboard GWM 25 18. Aluminum RFA 26 Roofing ARFS 32 Roofing RFC 28 Roofing ARFS 30 Roofing Cap Nail Power-Tool Driven Roofing Washered RFR 30 Roofing Cap Nail Power-Tool Driven Roofing Washered RFR 31 Roofing Washered RFR 32 20 Siding Shels Shels Sistel RFR 36 20 Siding Shels Shels Sistel RFR 36 21. Shingle SHAD/SHAS 35 Steel Roofing Washered RFR 34 Aluminum Roofing Washered RFR 36 20 Siding Shels Shels Sistel RFR 36 20 Siding Shels Shels Sistel RFR 36 20 Siding Shels Shels Sistel RFR 36 21. Shingle SHAD/SHAS 35 Steel Roofing Shels Shels Sistel RFR 36 20 Siding Shels Shels Shels 36 20 Siding Shels Shels Shels 36 21. Shaling SLASLC/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 RSRS 46 Reital Hardware RHS/MHR 47 Reits All Roof Sheathing RSRS 46 Reits All Reits All Roof Sheathing RSRS 47 Reits All Roof Sheathing RSRS 47 Reits All Reits All Roof Sheathing RSRS 47 Reits All Reits All Reits All Reits All Roof Sheathing RSRS 47 Reits All Re							
8. Corker CK 11 9. Aluminum CMA 12 Common CAPPER CMC 13 Common Steel CMC 13 Common Power-tool CMP 15 Driven Common 10. Concrete CTS/CTM 16 11. Double-headed DH 17 (Duplex) 12. Finish FH 18 13. Flooring FL 19 14. Lath LHF 20 Lath LHH 21 15. Masonry MR/MRH 21 16. Pallet PL 23 17. Gypsum wallboard GWS 24 Gypsum wallboard GWM 25 18. Aluminum RFA 26 Roofing ARFS 27 Roofing ARFS 28 Roofing ARFS 30 Reinforced Roofing Cap Nail Power-Tool Driven Roofing Washered Roofing Washered Roofing Washered Roofing Washered Roofing Washered Roofing Washered Roofing Roofing Washered Roofing Washered Roofing Washered Roofing Washered Roofing Washered Roofing Roofing Washered Roofing Washered Roofing R							
9. Aluminum CMA 12 Common Copper CMC 13 Common Steel CMS 14 Common Diven Common 10. Concrete CTS/CTM 16 11. Double-headed DH 17 (Duplex) 12. Finish FH 18 13. Flooring FL 19 14. Lath LHF 20 Lath LHH 21 15. Masonry MF/MRH 22 Lath LHH 21 16. Pallet PL 23 17. Gypsum wallboard GWS 24 Gypsum wallboard GWS 24 Gypsum wallboard GWS 24 Roofing ARFA 26 Roofing ARFA 30 Roofing ARFA 30 Roofing ARFA 30 Roofing ARFA 30 Roofing ARFA 31 Roofing ARFA 31 Roofing ARFA 32 Roofing ARFA 30 Roofing ARFA 31 Roofing ARFA 32 Roofing ARFA 32 Roofing ARFA 33 Roofing ARFA 34 Roofing ARFA 36 Roofing ARFA 37 Roofing ARFA 38 Roof Shank 38 Roof Shank Roof Roofing Roofing Roofing Roofing Roofing Roofing Roofing Roofing Roofing							
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Copper		٥.		• • • • • • • • • • • • • • • • • • • •			
Common   Steel   CMS				CMC	13		
Steel				00			
Common   Power-tool   Driven   Common   Common   Common   Concrete   CTS/CTM   16   CTS/CTM   16   CTS/CTM   16   CTS/CTM   17   CTS/CTM   16   CTS/CTM   16   CTS/CTM   16   CTS/CTM   16   CTS/CTM   16   CTS/CTM   16   CTS/CTM   17   CTS/CTM   16   CTS/CTM   16   CTS/CTM   17   CTS/CTM   16   CTS/CTM   17   CTS/CTM   18   CTS/CTM				CMS	14		
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15. Masonry 16. Pallet 17. Gypsum wallboard Gym RFA 26 Roofing RFS RFS 27 Roofing Copper-Clad RFC Roofing Umbrella RFL 29 Head Roofing Cap Nail Hand Driven Roofing Cap Nail Power-Tool Driven Roofing Washered Roofing Washered Roofing Washered Roofing RFS RFS 30 RFS 30 RFFN 30 RFFN 31 Hand Driven Roofing RFR 30 RFFN 31 Hand Driven Roofing RFR 30 RFFN 31 Hand Driven Roofing RFR 32 RFR 33 RFR 34 RFS 35 RFR 36 RFS 36 RFR 36 RFS 36 RFNS/RFND 37 RFNS/RFND 38 RFNS/RFND 38 RFNS/RFND 39 RFNS/RFND RFR 36 RFS		14.					
16. Pallet PL 23 17. Gypsum wallboard GWS 24 Gypsum wallboard GWM 25 18. Aluminum RFA 26 Roofing Steel RFS 27 Roofing Copper-Clad RFC 28 Roofing Umbrella RFL 29 Head Roofing Cap Nail MRH/PRH 31 Hand Driven Roofing Cap Nail Power-Tool Driven Roofing Washered RFE 34 Aluminum Roofing Washered RFE 34 Steel Roofing Steel RFS 35 Steel RFS 36 Steel RFR 30 R		15					
17. Gypsum wallboard GWS 24 Gypsum wallboard GWM 25 18. Aluminum RFA 26 Roofing Steel RFS 27 Roofing Copper-Clad RFC 28 Roofing Umbrella RFL 29 Head Roofing Cap Nail Hand Driven Roofing Cap Nail MRP/PRH 31 Hand Driven Roofing Washered Roofing Washered Roofing Washered Roofing Steel Roofing Steel RFS 34 Steel Roofing Washered Roofing							
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18. Aluminum		1/.					
Roofing   Steel   RFS   RFS   RFS   Roofing   Copper-Clad   RFC   RFC   Roofing   Umbrella   RFL   29   RFR   30   Reinforced   Roofing   Cap Nall   RFR   31   RFR   31   RFR   30   Reinforced   Roofing   Cap Nall   RFR   32   RFR   32   RFR   32   RFR   32   RFR   32   RFR   32   RFR   34   RFR   35   RFR   36   RF		10					
Steel		١ď.		DEA	26		
Roofing					07		
Copper-Clad RFC				HF5	27		
Roofing				DEO.	00		
Umbrella Head Roofing Steel Reinforced Roofing Cap Nail Hand Driven Roofing Washered Roofing Roof				RFC	28		
Head Roofing							
Reinforced Reinforced Roofing Cap Nail MRH/PRH 31   Hand Driven Roofing Washered RFNS/RFND 32   Power-Tool Driven Roofing Washered RFE 34   Number Roofing Washered RFE 34   Steel Roofing Washered RFE 34   Steel Roofing Steel Shingle SHSS/SHSR 36   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 Shank Standard Ring-Shank Ring Ring Ring Ring Ring Ring Ring Ring				RFL	29		
Steel							
Reinforced   Roofing   Cap Nail   F   667   MRH/PRH   31   Hand Driven				Teylen			
Roofing				RFR	30		
Cap Nail							
Hand Driven   Roofing   3   42   b - 3   2   0   0   0   0   0   0   0   0   0				MDII/DDII	0.4		
Cap Nail				MRH/PRH	31		
Cap Nail         MRP/PRP         32           Power-Tool Driven         Roofing           Washered         RFNS/RFND         33           Aluminum         Roofing         Washered         RFE           Washered         RFE         34           Steel         Roofing         RFE           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           49. Metal         MHS/MHR         48							
Power-Tool Driven   Roofing							
Roofing   Washered   RFNS/RFND   33   Aluminum   Roofing   Washered   RFE   34   Steel   Roofing     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   Standard Ring-Shank   SRS   47   Hardware   Nails   MHS/MHR   48   Hardware   Nails   MHS/MHR   48   Hardware   MHS/MHR   48   Hardware   MHS/MHR   48   MHS/M				MRP/PRP	32		
Washered Aluminum       RFNS/RFND       33         Aluminum       Roofing         Washered Steel       RFE       34         Steel Roofing       SHAD/SHAS       35         19. Shingle SHSS/SHSR       36       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 Ring Ring Shank Roof Sheathing Ring Ring Ring Ring Ring Ring Ring R							
Aluminum Roofing Washered RFE 34 Steel 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 46 Shank Standard Ring-Shank SRS 47 Hardware Nails  29. Metal Hardware Nails  MHS/MHR 48			S .				
Roofing   Washered   RFE   34   Steel   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     49. Metal   MHS/MHR   47     Hardware   Nails   MHS/MHR   48     19. Metal   MHS/MHR   48     19. Metal   MHS/MHR   48     19. Metal   MHS/MHR   48     19. Metal   MHS/MHR   48     10. Met				RFNS/RFND	33		
Washered Steel       RFE       34         Steel Roofing       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         Hardware       Nails       MHS/MHR       48         49. Metal       MHS/MHR       48							
Steel Roofing   Roofing   Shappen   Shingle   Shappen   Shingle   Shappen							
Roofing				RFE	34		
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       MHS/MHR       48							
Steel Shingle							
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     49.   Metal   Hardware   Nails     29.   Metal   MHS/MHR   48     Hardware   Hardware   MHS/MHR   48     48.		19.			35		
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     49.   Metal   MHS/MHR   47     Hardware   Nails   MHS/MHR   48     48.   Hardware   MHS/MHR   48     49.   Metal   MHS/MHR   48     48.   Hardware   MHS/MHR   48     40.   MHS/MHR   48     40.   MHS/MHR   MHS/MHR   48     41.   MHS/MHR   48     42.   MHS/MHR   48     43.   MHS/MHR   48     44.   MHS/MHR   48     45.   MHS/MHR   48     46.   MHS/MHR   48     47.   MHS/MHR   48     48.   MHS/MHR   48     49.   MHS/MHR   48     49.   MHS/MHR   48     40.			Steel Shingle		36		
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       47         Hardware       Neitsl       MHS/MHR       48		20		SDF/SDC/SDK	37		
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       47         Hardware       Nails       MHS/MHR       48         29.       Metal       MHS/MHR       48         Hardware       Hardware       MHS/MHR       48							
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         49.       Metal       MHS/MHR       47         Hardware       Nails       MHS/MHR       48         48       Hardware							
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       47         Hardware       Nails       MHS/MHR       48         Hardware       MHS/MHR       48							
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 47 Hardware Nails 29. Metal MHS/MHR 48 Hardware							
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       47         Hardware       Nails       MHS/MHR       48         Hardware       Hardware       48							
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       47         Hardware       Nails       Hardware         Langle MHS/MHR       48         Hardware       Hardware							
28. Post frame       PFRS       45         Ring Shank       Roof Sheathing Ring       RSRS       46         Shank       Standard Ring-Shank       SRS       47         29. Metal       MHS/MHR       47         Hardware       Nails       Netal       MHS/MHR       48         Hardware       Hardware       MHS/MHR       48							
Ring Shank   Roof Sheathing Ring   RSRS   46   Shank   Standard Ring-Shank   SRS   47   47   47   47   47   47   48   48							
Roof Sheathing Ring   RSRS   46		_0.			FO		
Shank   Standard Ring-Shank   SRS   47				RSRS	46		
Standard Ring-Shank         SRS         47           29.         Metal         MHS/MHR         47           Hardware         Nails         Nails           29.         Metal         MHS/MHR         48           Hardware         Hardware				попо	40		
29.         Metal         MHS/MHR         47           Hardware         Nails           29.         Metal         MHS/MHR         48           Hardware         Hardware	_			CDC	47		
H <del>ardware</del> <del>Nails</del> 29. <u>Metal</u> <u>MHS/MHR</u> 48 Hardware		00			4/		
Nails  29. Metal MHS/MHR 48  Hardware		<del>29.</del>		WHS/WHH	4/		
29. <u>Metal</u> <u>MHS/MHR</u> 48 Hardware							
Hardware		00		MUOMUB	46		
		29.		MHS/MHH	<u>48</u>		
<u>Nails</u>							
	<u></u>		<u>inails</u>				

TABLE 1 Continued

Туре		Style	Style Identification	Table
II—Cut nails (CN)	<del>-1.</del>	Common	<del>CM</del>	48
II—Cut nails (CN)	<u>1.</u>	Common	<u>CM</u>	<u>49</u>
	<del>-2.</del>	Basket	BK	<del>49</del>
	<u>2.</u>	Basket	BK GL	<u>50</u>
		Clout		<del>50</del>
	3. -1.	Clout	<u>CL</u> <del>GM</del>	<u>51</u> <del>51</del>
III—Spikes (SP)	<del>-1.</del>	Common	<del>CM</del>	<del>51</del>
III—Spikes (SP)	<u>1.</u>	Common	<u>CM</u>	<u>52</u>
	<del>-2.</del>	Gutter	GRF/GRO	<del>52</del>
	<u>2.</u> <del>3.</del>	Gutter	GRF/GRO	<u>53</u>
	<del>3.</del>	Round	RDC/RDF	<del>53</del>
	_3.	Round	RDC/RDF	54 54
IV—Staples (ST)	<del>1.</del>	Fence	<del>FN</del>	<del>54</del>
IV—Staples (ST)	<u>1.</u>	Fence	<u>FN</u>	<u>55</u>
<u> </u>	<del>-2.</del>	Poultry netting	PN	<del>55</del>
	2. 3.	Poultry netting	PN FG	56
	<del>3.</del>	Flat top crown	<del>FC</del>	<u>56</u> <del>56</del>
	3.	Flat top crown	<u>FC</u> <del>FCC</del>	<u>57</u> <del>57</del>
		Flat top crown		
		Flat top crown	FCC	<u>58</u> <del>58</del>
	<del>-4.</del>	Round or V crown	RC	
	4.	Round or V crown	<u>RC</u>	59
	<del>-5.</del>	Preformed	<del>PC</del>	<del>59</del>
	_5.	Preformed	PC RE	60 60
		Electrical		
	6.	Electrical	RE II US	61 61
	<del>7.</del>	Preformed hoop	PH	
	7.	Preformed hoop	PHICHAR	62 62
	8.	Cap	STC S. LELI	
	_8.	Cap	STC	<u>63</u>

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

1 // 1 1 2 1 2 1 2 / 1	Fastener Material ASTM F1667-20	Bend Angle, °
https://standards.iteh.ai/catal	Steel wire: (low-carbon, medium-low carbon, medium-carbon) (unhardened)	<del>1385-bd18-c00180</del> 1091d74/astm-f1667-20
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

F592 Terminology of Collated and Cohered Fasteners and Their Application Tools (Withdrawn 2017)<sup>4</sup> 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.

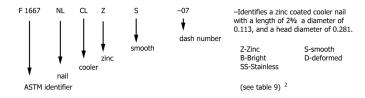
<sup>&</sup>lt;sup>4</sup> The last approved version of this historical standard is referenced on www.astm.org.



### 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, 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 3–47 wherever it applies.

### 5. Ordering Information

- 5.1 Orders for driven fasteners under this specification shall include the following information:
- 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. The following dimensional designations shall apply:

= trade designation (reference in penny weight), Preview S

L = length, in.,

H= head diameter or width, in.,

D = shank diameter, in.,

shank diameter, in., measured shank diameter, in (Tables 45-47)

= Measured crest diameter of deformed portion of nail shank, in., (Tables 45-47) 891091d74/astm-f1667-20  $\overline{T1}$ 

 $\frac{\overline{T1}}{\overline{TL}}D^*$ = Measured crest diameter minus the measured shank diameter, in. (Tables 45-47)

= Length of threaded section of nail shank, in. (Tables 45-47)

 $\overline{P}$ = Pitch or spacing of rings on a ring-shank nail, in., (Tables 45-47)

 $\overline{B}$ head separation, in. (Table 17), and

= approximate count per pound. No./lb

- 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  $\pm \frac{1}{32}$  in. for lengths up to and including 1 in.;  $\pm \frac{1}{16}$  in. for lengths over 1 in., up to and including  $2\frac{1}{2}$  in.;  $\pm \frac{3}{32}$  for lengths over  $2\frac{1}{2}$  in., up to and including 7 in.; and  $\pm \frac{1}{8}$  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  $\pm 0.002$  in. for diameters smaller than 0.076 in. and  $\pm 0.004$  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 54-60,55-61, and the following dimensional designations shall apply:
- 8.3.1 Hand Tool-Driven Nominal Dimensions:

= leg length, inside, in., D= round leg diameter, in., C= crown width, inside, in., and No./lb = approximate count per pound.

8.3.2 Power Tool–Driven Nominal Dimensions:

= round leg diameter, in.,

= leg length, outside, in.,

= leg thickness, in. (see Tables 56 and 57),

= leg thickness, in. (see Tables 57 and 58),

= leg width, in. (see Tables 56 and 57),

= leg width, in. (see Tables 57 and 58), crown width outside in and see Tables 57 and 58). = crown width, outside, in., and

= steel wire gage.

- 8.4 Tolerances on Nominal Dimensions for Staples:
- 8.4.1 Leg length, L, tolerances shall be  $+\frac{1}{32}$ ,  $-\frac{1}{64}$  in. for both hand tool-driven and power tool-driven staples.
- 8.4.2 Diameter tolerances for hand tool-driven round staples shall be  $\pm 0.002$  in. for diameters smaller than 0.076 in. and  $\pm 0.004$ 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 (see Tables 56 and 57). specified. When used in wood structural connections, dimensions, and tolerances in (Tables 57 and 58) shall apply.
- 8.4.4 Crown width tolerances are  $\pm \frac{1}{32}$  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 49–5050–51 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 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, hard-wiped, galvanized steel wire, electrodeposited (electrogalvanized) steel wire, or zinc flake/chromate dispersion-coated or electrogalvanized steel wire; or they shall be cut from uncoated (bright) steel wire and shall be hot-dip galvanized, electrodeposited zinc coated, mechanically deposited zinc coated, or zinc flake/chromate dispersion coated galvanized, after forming.
- 10.1.2 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 1.
- 10.1.2 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. If not otherwise specified, the coating weight shall be in accordance with Specification A641/A641M, Supplementary Requirements, Class 1. 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 or specification. When used in wood structural connections, dimensions and tolerances, for Type IV, Style 3 (Table 5657 or Table 57). 58) 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

# iTeh Standards

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

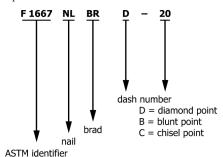
## **Document Preview**

ASTM F1667-20

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### TABLE 3 Type I, Style 1—Brads<sup>A</sup>

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.



- Identifies a brad nail with a length of 11/2, a diameter of 0.099, and a diamond point.



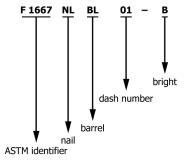


Dash No.	L	D	S	No./lb	Dash No.	L	D	S	No./lb
01	3/8	0.035		9520	21	13/4	0.062		670
02	1/2	0.035		7060	22	13/4	0.080		400
03	1/2	0.048		3990	23	13/4	0.099	5d	270
04	5/8	0.035		5680	24	2	0.062		580
05	5/8	0.048		3200	25	2	0.080		350
06	3/4	0.035		4800	26	2	0.113	6d	180
07	3/4	0.048		2620	27	21/4	0.080		320
08	3/4	0.062		1550	28	21/4	0.113	7d	160
09	7/8	0.035		4220	29	21/2	0.080		290
10	7/8	0.048		2220	30	21/2	0.131	8d	110
11	7/8	0.062		1280	31	23/4	0.131	9d	97
12	1	0.054		1500	32	3	0.148	10d	70
13	1	0.062		1120	33	31/4	0.148	12d	65
14	1	0.072	4/	904	34	31/2	0.162	16d	50
15	11/4	0.054	Ths:/	1210	35	4	0.192	20d	31
16	11/4	0.062	Pour	940	36	41/2	0.207	30d	24
17	11/4	0.080	3d	560	37	5	0.225	40d	18
18	11/2	0.054	I haci	1040	38	51/2	0.244	50d	14
19	11/2	0.080	DUC	470	39	6	0.262	60d	11
20	11/2	0.099	4d	320					

<sup>&</sup>lt;sup>A</sup>All dimensions are given in inches.

### TABLE 4 Type I, Style 2—Barrel Nails<sup>A</sup>

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



- Identifies a barrel nail with a length of 5%, a diameter of 0.067, a head diameter of 0.148, and a bright finish. B = bright

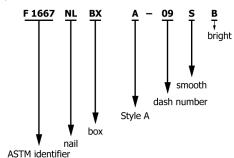
Z= Zinc

Dash No.	L	D	Н	No./lb	Dash No.	L	D	Н	No./lb
01	5/8	0.067	0.148	1.550	05	11/8	0.076	0.177	670
02	3/4	0.067	0.148	1.300	06	11/4	0.080	0.188	540
03	7/8	0.076	0.177	850	07	13/8	0.092	0.219	380
04	1	0.076	0.177	750	08	11/2	0.092	0.219	350

<sup>&</sup>lt;sup>A</sup>All dimensions are given in inches.

### TABLE 5 Type I, Style 3A—Box Nails<sup>A</sup>

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.



 Identifies a bright box nail, Style A, with a length of 3, a diameter of 0.128, a head diameter eter of 0.312, and a bright finish.

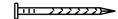
B = bright A = aluminum

S = smooth shank D = deformed shank

SS = stainless

Z = zinc





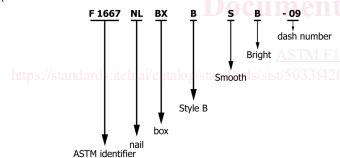
					F 1667	' NLBXA					
Dash No.	S	L	D	Н	No./lb	Dash No.	S	L	D	Н	No./lb
01	2d	1	0.067	0.188	940	08	9d	23/4	0.113	0.297	120
02	3d	11/4	0.076	0.219	590	09	10d	3	0.128	0.312	90
03	4d	11/2	0.080	0.219	450	10	12d	31/4	0.128	0.312	83
04	5d	13/4	0.080	0.219	390	11	16d	31/2	0.135	0.344	69
05	6d	2	0.099	0.266	220	12	20d	4	0.148	0.375	50
06	7d	21/4	0.099	0.266	200	13	30d	41/2	0.148	0.375	45
07	8d	21/2	0.113	0.297	140	14	40d	5	0.162	0.406	34

<sup>&</sup>lt;sup>A</sup>All dimensions are given in inches.

### Hen Standards

### TABLE 6 Type I, Style 3B—Box Nails<sup>A</sup>

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.



Identifies a bright box nail,
 Style B, with a length of 2 7/8, a diameter of 0.113, a head diameter of 0.297 and
 a bright finish

a bright finish
B = bright SS = stainless S = smooth shank
D = deformed shank

A = aluminumZ = zinc

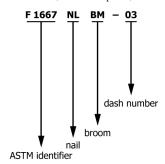
**\_\_\_\_** 

	F 1667 NLBXB												
Dash No.	S	L	D	Н	No./lb	Dash No.	S	L	D	Н	No./lb		
01	2d	1	0.058	0.172	1250	06	7d	21/8	0.086	0.250	280		
02	3d	<b>11/</b> 8	0.062	0.188	980	07	8d	23/8	0.099	0.266	190		
03	4d	13/8	0.067	0.203	680	08	9d	<b>2</b> 5/8	0.099	0.266	170		
04	5d	<b>1</b> 5/8	0.072	0.219	510	09	10d	27/8	0.113	0.297	120		
05	6d	17/8	0.086	0.250	315								

<sup>&</sup>lt;sup>A</sup>All dimensions are given in inches.

### TABLE 7 Type I, Style 4—Broom Nails<sup>A</sup>

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



 Identifies a broom nail with a length of ¾, a diameter of 0.072, and a head diameter of 0.203.

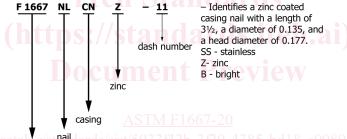


Dash No.	L	D	Н	No./lb
01	5/8	0.072	0.203	1480
02	5/8	0.080	0.219	990
03	3/4	0.072	0.203	1170
04	3/4	0.080	0.219	840

<sup>&</sup>lt;sup>A</sup>All dimensions are given in inches.

### TABLE 8 Type I, Style 5—Casing Nails<sup>A</sup>

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



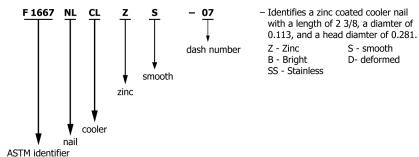
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				<u> </u>			>				
Dash No.	S	L	D	Н	No./lb	Dash No.	S	L	D	Н	No./lb
01	2d	1	0.067	0.099	1090	07	8d	21/2	0.113	0.155	150
02	3d	11/4	0.076	0.113	650	08	9d	23/4	0.113	0.155	135
03	4d	11/2	0.080	0.120	490	09	10d	3	0.128	0.170	95
04	5d	13/4	0.080	0.120	415	10	12d	31/4	0.128	0.170	90
05	6d	2	0.099	0.142	245	11	16d	31/2	0.135	0.177	75
06	7d	21/4	0.099	0.142	215						

 $<sup>^{</sup>A}\!$ All dimensions are given in inches.

### TABLE 9 Type I, Style 6—Cooler Nails<sup>A</sup>

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.



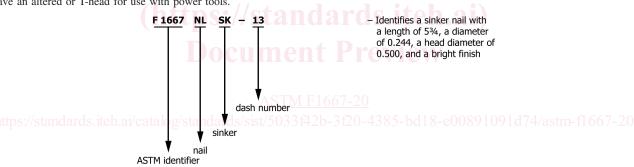
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Dash No.	S	L	D	Н	No./lb	Dash No.	S	L	D	Н	No./lb
01	2d	1	0.062	0.172	1110	06	7d	21/8	0.099	0.266	210
02	3d	11/8	0.067	0.188	840	07	8d	<b>2³/</b> 8	0.113	0.281	140
03	4d	13/8	0.080	0.219	490	08	9d	<b>2</b> 5/8	0.113	0.281	130
04	5d	15/8	0.086	0.234	370	09	10d	<b>2</b> <sup>7</sup> /8	0.120	0.297	100
05	6d	<b>1</b> 7/8	0.092	0.250	280						

<sup>&</sup>lt;sup>A</sup>All dimensions are given in inches.

### TABLE 10 Type I, Style 7—Sinker Nails<sup>A</sup>

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.



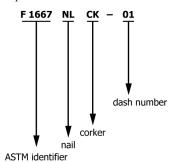


Dash No.	S	L	D	Н	No./lb	Dash No.	S	L	D	Н	No./lb
01	3d	11/8	0.067	0.172	940	08	12d	31/8	0.135	0.312	81
02	4d	13/8	0.080	0.203	530	09	16d	31⁄4	0.148	0.344	64
03	5d	15/8	0.086	0.219	390	10	20d	3¾	0.177	0.375	40
04	6d	17/8	0.092	0.234	290	11	30d	41/4	0.192	0.406	30
05	7d	21/8	0.099	0.250	220	12	40d	43/4	0.207	0.438	23
06	8d	23/8	0.113	0.266	150	13	60d	53/4	0.244	0.500	14
07	10d	27/8	0.120	0.281	110						

 $<sup>^{</sup>A}\!\mathsf{All}$  dimensions are given in inches.

### TABLE 11 Type I, Style 8—Corker Nails<sup>A</sup>

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.



 Identifies a corker nail with a length of 1, a diameter of 0.062, and a head diameter of 0.156.



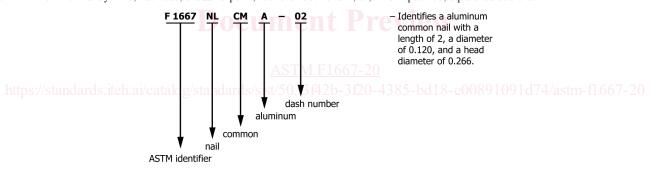
Dash No.	S	L	D	Н	No./lb	Dash No.	S	L	D	Н	No./lb
01	2d	1	0.062	0.156	1220	09	10d	27/8	0.135	0.312	89
02	3d	11/4	0.072	0.188	720	10	12d	31/8	0.135	0.312	81
03	4d	11/2	0.086	0.219	420	11	16d	33/8	0.148	0.344	62
04	5d	<b>1</b> 5/8	0.086	0.219	320	12	20d	37/8	0.177	0.375	38
05	6d	17/8	0.099	0.250	250	13	30d	43/8	0.192	0.406	29
06	7d	21/8	0.099	0.250	220	14	40d	47/8	0.207	0.438	22
07	8d	23/8	0.120	0.281	130	15	50d	53/8	0.226	0.469	17
08	9d	25/8	0.120	0.281	120	16	60d	57/8	0.244	0.500	13

<sup>&</sup>lt;sup>A</sup>All dimensions are given in inches.

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### TABLE 12 Type I, Style 9—Aluminum Common Nails<sup>A</sup>

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



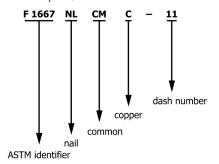


F 1667 NLCMA													
Dash No.	S	L	D	Н	No./lb	Dash No.	S	L	D	Н	No./lb		
01	4d	11/2	0.099	0.250	830	04	10d	3	0.162	0.312	170		
02	6d	2	0.120	0.266	430	05	16d	31/2	0.177	0.344	120		
03	8d	21/2	0.148	0.281	220	06	20d	4	0.199	0.406	78		

 $<sup>^{</sup>A}\!$ All dimensions are given in inches.

### TABLE 13 Type I, Style 9—Copper Common Nails<sup>A</sup>

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



 Identifies a copper common nail with a length of 2, a diameter of 0.134, and a head diameter of 0.281.

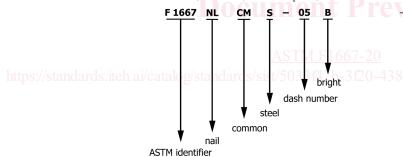


F 1667 NLCMC													
Dash No.	L	D	Н	No./lb	Dash No.	L	D	Н	No./lb				
01	5/8	0.065	0.156	1380	10	2	0.120	0.266	130				
02	3/4	0.065	0.156	1160	11	2	0.134	0.281					
03	3/4	0.072	0.172	960	12	21/2	0.134	0.281	86				
04	7/8	0.072	0.172	810	13	3	0.148	0.312	56				
05	1	0.072	0.172	700	14	31/2	0.165	0.344	40				
06	11/4	0.083	0.203	420	15	4	0.203	0.406	23				
07	11/2	0.109	0.250	210	16	41/2	0.220	0.438	18				
08	13/4	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				

<sup>&</sup>lt;sup>A</sup>All dimensions are given in inches.

### TABLE 14 Type I, Style 9—Steel Common Nails<sup>A</sup>

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



 Identifies a steel common nail with a length of 2, a diameter of 0.113, a head diameter of 0.266, and a bright finish.

B = bright Z = zinc coated

S = steel SS = stainless

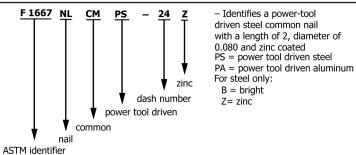


F 1667 NLCMS													
Dash No.	S	L	D	Н	No./lb	Dash No.	S	L	D	Н	No./lb		
01	2d	1	0.072	0.172	850	09	10d	3	0.148	0.312	66		
02	3d	11/4	0.080	0.203	540	10	12d	31/4	0.148	0.312	61		
03	4d	11/2	0.099	0.250	290	11	16d	31/2	0.162	0.344	47		
04	5d	13/4	0.099	0.250	250	12	20d	4	0.192	0.406	30		
05	6d	2	0.113	0.266	170	13	30d	41/2	0.207	0.438	23		
06	7d	21/4	0.113	0.266	150	14	40d	5	0.226	0.469	17		
07	8d	21/2	0.131	0.281	100	15	50d	51/2	0.244	0.500	14		
08	9d	23/4	0.131	0.281	92	16	60d	6	0.262	0.531	11		

<sup>&</sup>lt;sup>A</sup>All dimensions are given in inches.

### TABLE 15 Type I, Style 9—Power-tool Driven Common Nails<sup>A</sup>

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	L	D	Dash No.	L	D	Dash	L	D	Dash	L	D	Dash	L	D
			No.						No.			No.			No.		
01	11/4	0.080	15	13/4	0.086	29	2	0.148	43	13/4	0.120	57	23/8	0.113	71	3	0.131
02	11/4	0.086	16	13/4	0.092	30	21/4	0.092	44	17/8	0.120	58	23/8	0.120	72	3	0.148
03	11/4	0.092	17	13/4	0.099	31	21/4	0.099	45	17/8	0.131	59	23/8	0.131	73	31/4	0.120
04	11/4	0.099	18	13/4	0.113	32	21/4	0.113	46	17/8	0.148	60	23/8	0.148	74	31/4	0.131
05	11/2	0.080	19	17/8	0.080	33	21/2	0.092	47	2	0.120	61	21/2	0.120	75	31/4	0.148
06	11/2	0.086	20	<b>1</b> 7/8	0.086	34	21/2	0.099	48	2	0.131	62	21/2	0.148	76	31/2	0.135
07	11/2	0.092	21	<b>1</b> 7/8	0.092	35	21/2	0.113	49	21/8	0.099	63	21/2	0.162	77	31/2	0.148
08	11/2	0.099	22	17/8	0.099	36	21/2	0.131	50	21/8	0.113	64	25/8	0.148	78	31/2	0.162
09	11/2	0.113	23	17/8	0.113	37	31/2	0.131	51	21/8	0.120	65	23/4	0.120	79	4	0.148
10	<b>1</b> 5/8	0.080	24	2	0.080	38	11/2	0.120	52	21/8	0.131	66	23/4	0.131	80	4	0.162
11	<b>1</b> 5/8	0.086	25	2	0.086	39	11/2	0.131	53	21/8	0.148	67	23/4	0.148	81	41/2	0.148
12	<b>1</b> 5/8	0.092	26	2	0.092	40	11/2	0.148	54	21/4	0.120	68	27/8	0.120	82	41/2	0.162
13	<b>1</b> 5/8	0.099	27	2	0.099	41	11/2	0.162	55	21/4	0.131	69	3	0.120			
14	13/4	0.080	28	2	0.113	42	<b>1</b> 5⁄8	0.113	56	21/4	0.148	70	3	0.128			

 $<sup>^{\</sup>it A}$  All dimensions given in inches.

### ASTM F1667-20

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