~~Designation:F 626–96a (Reapproved 2003)~~ Designation: F 626 – 08

Standard Specification for Fence Fittings[1]

This standard is issued under the fixed designation F 626; 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.

1. Scope

1.1 This specification covers the materials, coating requirements, and inspection of fence accessories for chain-link fence for the following:

1.1.1 Post and line caps,
1.1.2 Rail and brace ends,
1.1.3 Top rail sleeves,
1.1.4 Tie wires, clips, and fasteners,
1.1.5 Tension and brace bands,
1.1.6 Tension bars,
1.1.7 Truss rod assembly,
1.1.8 Barbed wire arms,
1.1.9 Color coating of fittings, and
1.1.10 Fitting size terminology.

1.2 The values stated in inch-pound units are to be regarded as the standard. The SI values given in parentheses are for information only.

2. Referenced Documents

2.1 *ASTM Standards:* [2]

~~A641Specification for Zinc-Coated (Galvanized) Carbon Steel Wire~~
~~A641MSpecification for Zinc-Coated (Galvanized) Carbon Steel Wire (Metric)[2]~~ 641/A 641M Specification for ZincCoated (Galvanized) Carbon Steel Wire
A 809 Specification for Aluminum-Coated (Aluminized) Carbon Steel Wire
A 817~~Specification for Metallic-Coated Steel Wire for Chain Link Fence Fabric[2]~~ Specification for Metallic-Coated Steel Wire for Chain-Link Fence Fabric and Marcelled Tension Wire
B~~26/B26M Specification for Aluminum-Alloy Sand Castings~~ 26/B 26M Specification for Aluminum-Alloy Sand Castings
B 85 Specification for Aluminum-Alloy Die Castings
B 108 Specification for Aluminum-Alloy Permanent Mold Castings
B 117 Practice for Operating Salt Spray (Fog) ~~Testing~~ Apparatus
B 209 Specification for Aluminum and Aluminum-Alloy Sheet and Plate
B 209M Specification for Aluminum and Aluminum-Alloy Sheet and Plate (Metric)
B 211 Specification for Aluminum and Aluminum-Alloy Bar, Rod, and Wire
B 211M Specification for Aluminum and Aluminum-Alloy Bar, Rod, and Wire (Metric)
B 221 Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, ~~Shapes,~~Profiles, and Tubes
B 221M Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, ~~Shapes,~~Profiles, and Tubes (Metric)
B 429/B 429M Specification for Aluminum-Alloy Extruded Structural Pipe and Tube
B 800 Specification for 8000 Series Aluminum Alloy Wire for Electrical ~~Purposes:~~ PurposesAnnealed and Intermediate Tempers
F 552 Terminology Relating to Chain Link Fencing
F 668~~Specification for Poly(Vinyl Chloride) (PVC)-Coated Steel Chain-Link Fence Fabric[2]~~ Specification for Polyvinyl Chloride (PVC) and Other Organic Polymer-Coated Steel Chain-Link Fence Fabric

[1] This specification is under the jurisdiction of ASTM Committee F14 on Fences and is the direct responsibility of Subcommittee F14.40 on Chain Link Fence and Wire Accessories.

~~Current edition approved January 10, 2003. Published March 2003. Originally approved in 1979. Last previous edition approved in 1996 as F626-96a.~~
Current edition approved June 1, 2008. Published June 2008. Originally approved in 1979. Last previous edition approved in 2003 as F 626 - 96a(2003).

[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* ~~, Vol 01.06.~~volume information, refer to the standard's Document Summary page on the ASTM website.

F 934 Specification for ~~Standard~~ Colors for Polymer-Coated Chain Link Fence Materials

2.2 *U.S. Government Standard:*

MIL-R-60346-C Roving, Glass, Fibrous (For Prepreg Tape and Roving, Filament Winding, and Pultrusion Applications)[3]

3. Post and Line Caps

3.1 Post and line caps shall be fabricated from pressed steel or cast iron and hot-dip galvanized with a minimum of 1.2 oz/ft^2 ~~[366 g/m$^{(366\ g/m^2)}$]~~ of zinc coating of surface area, or from aluminum alloy 360.0 conforming to die cast Specification B 85, or sand cast or permanent mold alloy 356.0 or 713.0 conforming to Specification B 26/B 26M or B 108.

3.2 Post and line caps shall be designed to fit snugly over posts and exclude moisture from inside when tubular posts are used.

4. Rail and Brace Ends

4.1 Rail and brace ends, when required, shall be fabricated from pressed steel or cast iron, and hot-dip galvanized with a minimum of 1.2 oz/ft^2 ~~[366 g/m$^{(366\ g/m^2)}$]~~ of zinc coating of surface area, or from aluminum alloy 360.0 (see Specification B 85), or alloy 356.0 or 713.0 (see Specification B 26/B 26M or Specification B 108).

4.2 Rail and brace ends, or other approved means of connection, shall be provided when top rail or brace are required.

5. Top Rail Sleeves

5.1 Top rail sleeves shall be fabricated from pressed steel or round steel tubing and hot-dip galvanized with a minimum of 1.2 oz/ft^2 ~~[366 g/m$^{(366\ g/m^2)}$]~~ of zinc coating of surface area, or from aluminum alloy 6063-T6 (see Specification B 221, B 221M ~~or Specification B429)~~ or Specification B 429/B 429M).

5.2 Rail sleeve material shall be a minimum of 0.051 in. ~~[1.3 mm]~~(1.3 mm) in thickness if steel, or a minimum of 0.062 in. ~~[1.8 mm]~~(1.8 mm) in thickness if aluminum alloy, and a minimum of 6 in. ~~[152.4 mm]~~(152.4 mm) in length.

5.3 The rail sleeve must be fabricated to prevent movement along the rail.

6. Tie Wires and Clips

6.1 Tie wires or clips, or both, for attaching chain-link fabric to round tubular or rectangular roll-formed horizontal rails and intermediate posts shall be one of the following systems, as selected by the purchaser:

6.1.1 *Standard Round Wire Ties*~~with either a preformed hook or pigtail at one end, designed to engage one picket of the chain-link fabric at the preformed end, wrap around the rail or post a minimum of 180°, and wrap around one picket of the chain link fabric at least one full turn at the other end in a manner that will draw up tightly around the rail or post. Standard round wire ties shall be of one of the following materials, as selected by the purchaser:~~ with either a preformed hook or pigtail at one end, shall be designed of sufficient length to engage one picket of the chain-link fabric at the preformed end of the tie by wrapping it with two 360 degree turns and then wrapping the body of the tie around the rail or post a minimum of 180 degrees. The opposite end of the tie should be secured to the nearest chain-link fabric picket on this other side of the post or rail also with two 360 degree wraps. The final process of tightening the tie on the fabric picket wire should draw the fabric and the main body to the tie tightly to the rail or post. Care must be taken to ensure that the ends of the ties or clips do not protrude beyond the vertical plane on either side of the chain-link fabric to avoid injury to pedestrians in contact with the fence. Standard round wire ties shall be of one of the following materials, as selected by the purchaser:

6.1.1.1 Twelve-gage (0.106 ± 0.004-in. ~~[2.69~~(2.69 ± ~~0.10-mm])~~0.10-mm)) steel with a tensile strength range from 55 to 65 ksi and with one of the following coatings, as selected by the purchaser:

(*1*) A minimum of 0.80 oz/ft^2 ~~[230 g/m$^{(230\ g/m^2)}$]~~ of zinc in accordance with Specification A 641 (A 641M), Class 3 or A coating.

(*2*) A minimum of 0.35 oz/ft^2 ~~[107 g/m$^{(107\ g/m^2)}$]~~ of aluminum in accordance with Specification A 809.

6.1.1.2 Nine-gage (0.148 ± 0.005-in. ~~[3.76~~(3.76 ± ~~0.10-mm])~~0.10-mm)) steel with a tensile strength range from 55 to 65 ksi and with one of the following coatings, as selected by the purchaser:

(*1*) A minimum of 0.90 oz/ft^2 ~~[270 g/m$^{(270\ g/m^2)}$]~~ of zinc in accordance with Specification A 641 (A 641M), Class 3 or A coating.

(*2*) A minimum of 0.40 oz/ft^2 ~~[122 g/m$^{(122\ g/m^2)}$]~~ of aluminum in accordance with Specification A 809.

NOTE 1—Heavier zinc coatings than those listed in 6.1.1.1 (*1*) and 6.1.1.2 (*1*) may be specified if desired, to match the minimum zinc coating specified for the fence fabric.

6.1.1.3 Nine-gage (0.148 ± 0.005-in. ~~[3.76~~(3.76 ± 0.125-mm~~]~~)) or (6-gage 0.192 ± 0.005-in. ~~[4.88~~(4.88 ± 0.125-mm~~]~~)) aluminum Alloy 1350-H19 or approved equal.

6.1.2 *High-Security Round Wire Ties* shall be one of the following, as selected by the purchaser:

6.1.2.1 *Power-Fastened Round Wire Ties* , preformed to the radius of the rail or post and configurated to wrap a full 360° around the rail or post and minimum of one complete diamond of the chain-link fabric. The two ends of the tie shall be preformed in such a manner that they can be twisted together in a close helix of 1½ machine turns, which is equivalent to 3 full twists, thereby

~~[3] Annual Book of ASTM Standards, Vol 02.02.~~

[3] Available from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111–5094, Attn: NPODS.