Designation: F668 – 11

Standard Specification for Polyvinyl Chloride (PVC), Polyolefin and Other Polymer-Coated Steel Chain Link Fence Fabric[1]

This standard is issued under the fixed designation F668; 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 polyvinyl chloride and other conforming organic polymer-coated steel chain-link fabric, coated before weaving. Polyvinyl chloride, polyolefin, and other organic polymer coating hereinafter will be designated as polymer coating.

1.2 Fabric produced from three classes of wire coatings are covered as follows:

1.2.1 *Class I* consists of polymer coatings extruded over zinc-coated, aluminum-coated, or zinc-5 % aluminum-mischmetal alloy-coated, or zinc-5 % aluminum-mischmetal alloy-coated steel wire.

1.2.2 *Class 2a* consists of polymer coating extruded and adhered to zinc-coated, aluminum-coated, or zinc-5 % aluminum-mischmetal alloy-coated steel wire.

1.2.3 *Class 2b* consists of polymer coating fused and adhered to zinc-coated, aluminum-coated, or zinc-5 % aluminum-mischmetal alloy-coated steel wire.

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

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A90/A90M Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

A428/A428M Test Method for Weight [Mass] of Coating on Aluminum-Coated Iron or Steel Articles

D1499 Practice for Filtered Open-Flame Carbon-Arc Exposures of Plastics

F552 Terminology Relating to Chain Link Fencing

F934 Specification for Colors for Polymer-Coated Chain Link Fence Materials

G152 Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials

G153 Practice for Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials

G155 Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials

2.2 *U.S. Federal Standard:*

Fed. Std. No. 123 Marking for Shipments (Civil Agencies)[3]

2.3 *U.S. Military Standards:*

MIL-STD-129 Marking for Shipment and Storage[3]

3. Terminology

3.1 *Definitions*—For definitions of terms such as chain-link fence fabric, selvage, knuckle, twist, and diamond count, see Terminology F552.

4. Ordering Information

4.1 Orders for chain-link fence fabric purchased to this specification shall include the following information:

4.1.1 Quantity.

4.1.2 Class of polymer coating to be applied to the metallic-coated core wire.

4.1.3 Color of coating (see 16.5.1).

4.1.4 Size of mesh (see Table 1).

4.1.5 Diameter of metallic-coated core wire or minimum breaking strength, or both (see Tables 1-3).

4.1.6 Height of fabric.

4.1.7 Type of selvage if nonstandard (see 12.1 and 12.2).

4.1.8 Diamond count if nonstandard (see 9.1 and Table 2).

4.1.9 Certification, if required.

4.2 Any tests required other than those specifically covered in this specification must be stipulated by the purchaser in the order or contract.

[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.

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[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] Available from the procuring activity or as directed by the contracting office or from Standardization Documents Order Desk, Bldg. 4 Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.

appropriate means to remove all slack. The tension applied shall not reduce the actual height of the fabric by more than 1⁄16 in./ft (5.2 mm/m) of height or by more than ½ in. (12.7 mm), whichever is less.

19. Field Sampling and Number of Tests

19.1 The purchaser may select at random one roll from every 50 rolls or fraction thereof for test purposes, except in no case shall fewer than two rolls be sampled.

19.2 Sample rolls thus selected shall be checked for weave (Section 7), size of mesh (Section 8), diamond count (Section 9), core wire size (Section 10), height of fabric (Section 11), selvage (Section 12), and length (Section 18).

19.3 Test specimens taken from the outside end of the sample rolls shall be tested for breaking strength (Section 13), weight of zinc, aluminum, or zinc-5 % aluminum-mischmetal alloy coating (Section 14), and thickness of polymer coating (Section 15).

19.4 If any specimen tested fails to conform to the specified requirements, the roll represented by the specimen shall be rejected and two additional rolls shall be tested, both of which shall meet the requirements in every respect; otherwise the lot represented by the samples may be rejected.

19.5 Unless otherwise stipulated by the purchaser, tests for breaking strength (Section 13), weight of zinc, aluminum, or zinc-5 % aluminum-mischmetal alloy coating (Section 14), thickness of polymer coating (Section 15), and properties of polymer-coated wire (Section 16) made on the wire prior to weaving may be substituted for tests made on the wire from the finished fabric.

20. Inspection

20.1 The seller is responsible for the performance of all inspection and test requirements as specified herein. The seller may use his own or other suitable facilities for inspection and testing unless the purchaser does not approve at the time the order is placed. Purchaser has the right to make any of the inspection and tests outlined where such are deemed necessary.

21. Certification and Reports

21.1 Upon the request of the purchaser in the contract or order, a manufacturer's certification that the material was produced in accordance with the specification shall be furnished.

22. Packaging, Marking, and Loading for Shipment

22.1 Each length of fabric shall be tightly rolled and firmly tied. Each shipment of fabric shall be identified as to the class of polymer coating, the color, the size of mesh, core wire gauge, the height and length of fabric in each roll, ASTM Designation F668, and the name or mark of the manufacturer. These requirements apply unless otherwise specified.

22.2 When specified in the contract or order, and for direct procurement by or direct shipment to the U.S. government, marking for shipment, in addition to requirements specified in the contract or order, shall be in accordance with MIL-STD-129 for U.S. military agencies and in accordance with Fed. Std. No. 123 for U.S. government civil agencies.

23. Keywords

23.1 chain-link fence, steel; coatings, polyvinyl chloride (PVC); core wire gauge; fence/fencing materials, chain-link; organic polymer coating; organic polymer-coated chain-link fabric; organic polymers; polyvinyl chloride (PVC) coated chain link fence fabric; polyvinyl chloride (PVC) coating on iron and steel articles; polyvinyl chloride (PVC) plastics

APPENDIX

(Nonmandatory Information)

X1. METRIC EQUIVALENTS

TABLE X1.1 Approximate Metric Equivalents for Tables 1 and 2

Size of Wire and Mesh, in. (mm)	Height of Fence Fabric, in. (mm)
Wire	
0.192 (4.88)	36 (910)
0.148 (3.76)	42 (1070)
0.120 (3.05)	48 (1220)
0.105 (2.67)	60 (1520)
0.080 (2.03)	72 (1830)
	84 (2130)
Mesh	96 (2440)
⅜ (10)	108 (2740)
½ (13)	120 (3050)
⅝ (16)	144 (3660)
1 (25)	
1¼ (32)	
1¾ (44)	
2 (50)	
2⅛ (54)	