



Standard Specification for Polymer Privacy Insert Slats for Chain Link Fabric and Privacy Chain Link Fabric Manufactured Containing Pre- Installed Privacy Slats¹

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1. Scope

1.1 This specification covers polymer privacy insert slats designed for insertion into chain link fabric after the chain link fence installation and privacy chain fabric having slats pre-inserted into chain link mesh during the chain link weaving process.

1.1.1 Type P-V consists of polyethylene privacy insert slats hand inserted vertically into standard mesh chain link fabric after the fence installation.

1.1.2 Type P-D consists of polyethylene privacy insert slats hand woven diagonally into standard mesh chain link fabric after the fence installation.

1.1.3 Type F-VDH consists of modified fiberglass privacy insert slats hand woven, vertically, diagonally or horizontally into standard mesh chain link fabric after the fence installation.

1.2 Type PI-V consists of privacy chain link fabric containing vertical high density polyethylene privacy slats pre-inserted into the chain link mesh during the chain link weaving process. Style 1a: Wider, 2 $\frac{3}{8}$ in. [60.3 mm] to 3 in. [76.2 mm] slats, pre-inserted into specially designed larger mesh. Style 1b: Type P-V friction fit slats pre-inserted into standard 2 in. [50 mm] chain link mesh.

1.3 The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

¹ This test method 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. Referenced Documents

2.1 *ASTM Standards*:²

A392 Specification for Zinc-Coated Steel Chain-Link Fence Fabric

A491 Specification for Aluminum-Coated Steel Chain-Link Fence Fabric

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

F552 Terminology Relating to Chain Link Fencing

F567 Practice for Installation of Chain-Link Fence

F626 Specification for Fence Fittings

F668 Specification for Polyvinyl Chloride (PVC), Polyolefin and Other Polymer-Coated Steel Chain Link Fence Fabric

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

F1043 Specification for Strength and Protective Coatings on Steel Industrial Fence Framework

F1083 Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures

F1345 Specification for Zinc-5 % Aluminum-Mischmetal Alloy-Coated Steel Chain-Link Fence Fabric

2.2 *Chain Link Fence Manufacturers Institute*:³

WLG 2445 Chain Link Fence Wind Load Guide for the Selection of Line Post and Line Post Spacing

2.3 *American Society of Civil Engineers and Structural Engineering Institute*:⁴

ASCE/SEI 7-10 Minimum Design for Buildings and Other Structures

3. Terminology

3.1 *Definitions*:

3.1.1 *privacy slat*—a plastic polymer strip, tube or profile designed to slide into chain link fabric vertically, horizontally or diagonally for the purpose of reducing visibility, providing

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 American Society of Civil Engineers (ASCE), 1801 Alexander Bell Dr., Reston, VA 20191, <http://www.asce.org>.

a level of privacy, security, wind screen or enhancing the aesthetics of chain link fence systems.

3.1.2 *locking channel*—a horizontal channel shaped polymer extrusion designed to lock vertical privacy slats in place.

3.1.3 *bow tie knuckle selvage*—a modified larger horizontal chain link knuckle selvage that aids in securing the PI-V chain link privacy slat in place. (Chain link knuckle, chain link selvage see Terminology **F552**.)

4. Ordering Information

4.1 Orders for privacy insert slats purchased to this specification shall include the following information:

4.1.1 Quantity; length of fence.

4.1.2 Height of fence.

4.1.3 Type of slat; P-V, P-D or F-VDH.

4.1.4 Installation orientation for F-VDH type slats: vertical, diagonal, horizontal.

4.1.5 Chain link mesh size.

4.1.6 Percent of closure or privacy requirement.

4.1.7 Slat locking requirement.

4.1.8 Style 1a or 1b Type PI-V privacy chain link fabric.

4.1.9 ASTM chain link specification for Type PI-V privacy chain link fabric.

4.1.10 Color of slat.

4.1.11 Color of polymer coated Type PI-V fabric in accordance with Specification **F934** when applicable.

4.1.12 Certification to this standard if required.

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

5. Privacy Slat Design Configurations

5.1 Slat designs shall be of the width to insert securely into the specific chain link mesh size. Manufacturers offer multiple privacy slat configurations, lengths, widths as well as slats containing side fins. The various slat configurations provide visual closure from approximately 70 % to 95 %. The Type P-V, P-D, and F-VDH slat inserts are available for standard ASTM chain link fabric mesh sizes; 1 ¾ in. [44.5 mm], 2 in. [50 mm] and 2 ½ in. [54 mm]. Slat widths range from 7/8 in. [22 mm] to 1 ¾ in. [44.5 mm] depending on the mesh size, percent of closure and orientation, vertical, diagonal or horizontal. The insert slats for the PI-V Style 1a privacy chain link fabric are of a wider width, 2 ¾ in. [60.3 mm] to 3 in. [76.2 mm].

5.2 The length of the slat inserts or a combination of the slat and horizontal locking channel shall cover the full diamond portion of the chain link fabric. Depending on the mesh size, installation orientation and slat design the coverage height could be 1 in. [25 mm] less than the height of the fence.

6. Materials

6.1 Type P-V slats shall be a semi-rigid high density polyethylene extrusion.

6.2 Type P-D slats shall be a flexible low density polyethylene extrusion supplied with brass rivet type fasteners.

6.3 Type F-VDH slats shall be semi-rigid fiberglass reinforced plastic composed of glass fiber reinforcements, polyester resins, pigments and fillers supplied with nylon or aluminum pop rivet fasteners.

6.4 Type PI-V pre-installed vertical slats shall be semi-rigid high density polyethylene extruded slats. The slats are inserted into chain link fabric that is in compliance with the ASTM chain link fabric standards listed below, using 9 gauge, 0.148 in. [3.76 mm] diameter pre-coated steel wire: **A392** Galvanized Class 1, 1.20 oz/ft² [366 g/m²] **A491** Aluminum-Coated, 0.40 oz/ft² [122 g/m²] **F668** Polymer-Coated Class 2b fused **F1345** Zinc-5% Aluminum-Mischmetal Alloy-Coated Class 1, 0.60 oz/ft² [183 g/m²].

6.4.1 Privacy chain link fabric shall have a knuckle or bow knuckle selvage at the top and bottom to aid in securing the slats.

6.4.2 Friction locking semi-rigid high density polyethylene privacy slats designs can be installed without the need for staples or locking channels.

6.4.3 *PI-V Style 1a*—2 ¾ in. [60.3 mm] to 3 in. [76.2 mm] wide slats inserted into a specifically designed larger mesh woven using 9 gauge, 0.148 in. [3.76 mm] chain link fabric. Secure slats with stainless steel staples or use friction locking design. (The larger mesh configuration designed for the accommodation of the 2 ¾ in. [60.3 mm] to 3 in. [76.2 mm] slat is not listed in ASTM chain link fabric standards and is unique only to this product.)

6.4.4 *PI-V Style 1b*—Contains friction locking Type P-V slats inserted into ASTM standard 2 in. [50 mm] mesh 9 gauge, 0.148 in. [3.76 mm] chain link fabric.

6.5 Privacy slats shall have a minimum tensile strength of 3,700 psi [25.5 MPa].

6.6 Privacy slats shall not support combustion.

6.7 Manufacturers of privacy slats offer a wide variety of colors; color shall be distributed throughout the slat. Slats that are required to match the polymer coated chain link fabric or framework shall be in accordance with Specification **F934**: green, olive green, brown, and black.

7. Weathering

7.1 The polymer privacy slats shall not fade or crack under normal conditions. Slats shall have demonstrated the ability to withstand 1000 hours when tested in a weatherometer apparatus in accordance with Practice **D1499**.

8. Chain Link Fence Framework

8.1 Framework in accordance with Specification **F1043**, Table 3 or Specification **F1083**. Fences containing privacy slats require the fence framework to be designed to support the wind load. The post size and spacing can be calculated using the Chain Link Fence Manufacturers Institute's Wind Load Guide for the Selection of Line Posts and Line Post Spacing, WLG 2445. ASCE/SEI 7-10 notes that a percent of closure of 70 % or greater for freestanding walls/fences is classified as a solid wall thus chain link fence containing privacy inserts is generally considered a solid fence. Those installations having a percent of closure less than 70 % surface area can use the

actual percentage for the open area exclusive of the fabric used in addition to the closure resulting for the fabric being used to calculate the wind load force which may reduce the line post size and spacing requirement.

9. Tie Wires and Hog Rings

9.1 Wind load forces on chain link fences containing privacy inserts require the chain link fabric to be securely tied to the line posts, rails and tension wire. Tie wire and hog rings shall be 9 gauge steel or aluminum as specified and fastened in accordance with Specification **F626**. Polymer coated ties and hog rings shall have a 9 gauge, 0.148 in. [3.76 mm] core wire.

10. Installation

10.1 Follow the manufacturer's recommended installation for the Type P-V, P-D and F-VDH slats, especially noting the

method of locking the slats in place via rivets, staples, locking channel, or friction locking slats.

10.2 Install the Type PI-V chain link privacy mesh fabric in accordance with Practice **F567**.

10.3 Secure the 9 gauge, 0.148 in. [3.76 mm] ties and hog rings in accordance with Practice **F567** and Specification **F626** no less than 15 in. [381 mm] on center.

11. Keywords

11.1 chain link fence inserts; chain link privacy inserts; chain link privacy slats; fence inserts; fence slats; privacy slats

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