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Standard Specification for Steel Chain-Link Fencing Materials Used for High Security Applications¹

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1. Scope

1.1 This specification covers chain-link fencing material applications for high security applications.

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

2. Referenced Documents

2.1 ASTM Standards:²

A121 Specification for Metallic-Coated Carbon Steel Barbed Wire

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

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

A824 Specification for Metallic-Coated Steel Marcellled Tension Wire for Use With Chain Link Fence

F567 Practice for Installation of Chain-Link Fence

F626 Specification for Fence Fittings

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

F900 Specification for Industrial and Commercial Swing Gates

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

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

F1184 Specification for Industrial and Commercial Horizontal Slide Gates

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

F1379 Terminology Relating to Barbed Tape

F1664 Specification for Poly(Vinyl Chloride) (PVC) and

Other Conforming Organic Polymer-Coated Steel Tension Wire Used with Chain-Link Fence

F1665 Specification for Poly(Vinyl Chloride) (PVC) and Other Conforming Organic Polymer-Coated Steel Barbed Wire Used With Chain-Link Fence

F1910 Specification for Long Barbed Tape Obstacles

F1911 Practice for Installation of Barbed Tape

2.2 Other Standard:

UL 325 Door, Drapery, Gate, Louver, and Window Operators and Systems³

3. Significance and Use

3.1 Typical end users of this specification require higher than normal security.

4. Materials and Manufacture

4.1 *Framework*—Shall meet the size and strength requirements in Specification F1043 for heavy industrial fence framework. Where icing conditions and high wind loads are prevalent or fences are higher than 12 ft [3.7 m], strength requirements shall be determined through engineering calculations. Horizontal top, mid or bottom rails if specified shall be 1.660-in. [42-mm] O.D., or roll-formed section 1¼ by 1⅝ in. [32 by 41 mm]. Framework may be polymer-coated and color shall be one of the choices listed in Specification F934. Framework coatings shall be in accordance with Specification F1043.

4.2 *Fabric*—Mesh larger than 1 in. [25 mm] shall be 6 gauge, 0.192 in. [4.88 mm] or 9 gauge, 0.148 in. [3.76 mm]; 1-in. mesh shall be 9-gauge coated steel wire conforming to Specifications A392, A491, or F1345 as selected if metallic-coated, or conforming to Specification F668 if polymer-coated. Mesh smaller than 1 in. shall be 11 gauge, 0.120 in. [3.05 mm] conforming to Specifications A491, F668, or F1345 as selected.

NOTE 1—The various chain link fabric specifications list fabric heights up to and including 12-ft [3.7-m] height. Some fabrics are available up to 20 ft [6.1 m]. Reference Specification F567 for fabric installation especially where two fabric heights are spliced horizontally. Chain link fabric shall be installed on the secure side of the fence.

¹ This specification is under the jurisdiction of ASTM Committee F14 on Fences and is the direct responsibility of Subcommittee F14.50 on High Security Fences and Perimeter Barriers.

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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 Underwriters Laboratories (UL) Corporate Progress, 333 Pfingsten Rd., Northbrook, IL 60062-2096.