



Poly(Vinyl Chloride) (PVC) Coated Steel Chain Link Fence Fabric

Class 2a – Extruded and Adhered

ASTM F668, Federal Specification RR-F-191/1E Type IV, AASHTO M-181 Type IV Class A

Product Name: Extruded and Adhered Poly(Vinyl Chloride) PVC Coated Steel Chain Link Fence Fabric.

Basic Use: Extruded and adhered PVC coated fabric is a bonded vinyl, high strength galvanized steel chain link fence fabric for industrial, commercial and institutional applications. Extruded and Adhered Fabric is contained in local, state and federal government specifications for use in prison, road, dock, airport, housing, forestry, and military use.

Composition and Material: The galvanized steel core wire for producing extruded and adhered PVC coated steel chain link fence fabric is produced by cold-drawing good commercial grade steel rod into wire of the appropriate diameter. The steel rod from which the wire is drawn is produced by the open hearth, electric furnace or basic oxygen process. The galvanized coating is produced by passing the cleaned wire through a bath of molten zinc which conforms to ASTM B6. The extruded and adhered coating is produced by first applying a molecular bonding agent to the galvanized core wire to eliminate the slippage of the PVC. A coating of PVC 0.015" (0.38mm) - 0.025" (0.64mm) is then pressure bonded to the wire.

Standards:

ASTM B6 – Slab Zinc

ASTM F567 – Installation of Chain Link Fence

ASTM F668 – Poly(Vinyl Chloride) (PVC) and Other Organic Polymer-Coated Steel Chain Link Fence Fabric, Class 2a

Federal Specification RR-F-191K/1E – Fencing, Wire, and Post Metal (Chain Link Fence Fabric), Type IV

AASHTO M-181 – Chain Link Fence, Type IV, Class A

Technical Data:

General: The manufacturer, if requested, will supply samples and certification that all materials furnished comply with the appropriate specifications.

Chain Link Fence Fabric: The base metal of the chain link fence fabric is composed of commercial quality, medium carbon galvanized (zinc coated) steel wire. The vinyl coating is continuously bonded over the galvanized wire by the extrusion bonding process. A bonding pressure to 5 ksi (34 MPa) ensures a dense and impervious coating free of voids, as well as a smooth and lustrous surface appearance. Vinyl coating thickness, galvanized coating weight, and wire tensile strength conform to ASTM F668, Class 2a. Federal Specification RR-F-191/1E Type IV, and AASHTO M-181 Type IV, Class A, as shown in table 1. The wire is PVC coated before weaving and is free and flexible at all joints. Unless otherwise specified, fabric woven in 2" (50 mm) mesh, under 72" (1,830 mm) is knuckled at both selvages; fabric 72" (1,830 mm) high and over is knuckled at one selvage and twisted at the other. All fabrics woven into meshes under 2" (50 mm) have both selvages knuckled. Properties of PVC used for coating are in Table 3.

Wire Coating: Only plasticized poly(vinyl chloride) (PVC) with a low temperature (-20 C ; -4 C) plasticizer and no extenders or extraneous matter other than the necessary stabilizers and pigments, is used. The PVC coatings resists attack from prolonged exposure to dilute solutions most common mineral acids, seawater, and dilute solutions of most salts and alkali. See Table II. The PVC coated wire shall pass the test for adhesion contained in ASTM F668 for Class 2a chain link fabric.

Installation: Install fence in accordance with ASTM Practice 567. Handle all PVC coated material with care. If PVC coating is damaged during installation, contractor must replace or repair the material at own expense.

Maintenance: Periodic inspection is recommended but no routine maintenance is required.

Poly(Vinyl Chloride) (PVC)- Coated Steel Chain Link Fence Fabric

EXTRUDED AND ADHERED

ASTM F668 Class 2a, Federal specification RR-F-191/1E Type IV, AASHTO M-181 Type IV, Class A

Table 1 – PVC Coated Steel Wire Characteristics

Zinc Coated Core Wire Size			PVC Coated Finished Wire Size	PVC Coated Wire Allowable Variance		Core Wire Zinc Coating Weight, min.		PVC Coating Thickness		Breaking Strength, minimum		Tensile Strength, min	
Gage	Inch	mm	Gage	Inch	mm	Oz/ft ²	g/m ²	Inch	mm	lbf	Newtons	ksi	MPa
9	0.148	3.76	6	±0.005	±0.13	0.30	92	0.015 to 0.025	0.38 to 0.64	1,290	5,740	75	515
11	0.120	3.05	8	±0.005	±0.13	0.30	92			850	3,780	75	515
14	0.080	2.03	11	±0.005	±0.13	0.25	76			380	1,690	75	515

Note: Core wire sizes less than 0.120" (3.05 mm) are not contained in Federal specification RR-F-191 or AASHTO M-181

Table 2 – PVC Coated Chain Link Fabric Sizes

Mesh Size	Finished Wire Gage	Fabric Wire Height Inch	Selvage K- Knuckled, T-Twisted/Barbed	Roll Size
Inch				ft
2"	6, 8	18" – 240"	KK, KT, TT	25', 50'
1 3/4"	6, 8	18" – 240"	KK only	25', 50'
1"	8	18" – 144"	KK only	25'

Maximum Security Mesh:

5/8"	11	18" – 72"	KK only	25'
1/2"	11	18" – 72"	KK only	25'
3/8"	11	18" – 72"	KK only	25'

Table 3 – Typical Vinyl Properties

Test	Test Method	Value
Specific Gravity	ASTM D 792	1.30 ± 0.03
Hardness, Durometer	ASTM D 2240	A90 ± 5
Tensile Strength	ASTM D 412	2,600 ± 5%
Ultimate Elongation	ASTM D 412	275% ± 5%
Mandrel Bend Test, 10X mandrel	ASTM D 668	-20° F (-29° C)
Dielectric Strength, volt/mil	ASTM D 149	750
Compression cut-through, lbs	BELL LABS	1,500
Accelerated Aging Test	ASTM D 1499	1,500 hrs @ 145° F