POLYVINYL CHLORIDE (PVC) COATED STEEL CHAIN LINK FENCE FABRIC

ASTM F668-FUSED AND ADHERED CLASS 2b FEDERAL SPECIFICATION RR-F-191/1E TYPE IV AASHTO M-181 TYPE IV CLASS B

JAMIESON FENCE SUPPLY

FENCE SPEC DATA SHEET

PRODUCT NAME

Fused and Adhered Polyvinyl Chloride PVC Coated Steel Chain Link Fence Fabric.

BASIC USE

Fused and adhered PVC-coated fabric is a bonded vinyl, high strength galvanized steel chain link fence fabric for industrial, commercial and institutional applications. Fused 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 fused and adhered PVC-coated steel chain link fence fabric is produced by cold-drawing good commercial grade steel rod into a 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 fused and adhered PVC coating is produced by first applying a thermoset bonding agent to the galvanized core wire to which the PVC is bonded. A coating of PVC 0.006 in. (0.15 mm) - 0.010 in. (0.25 mm) is then fusion bonded to the wire.

STANDARDS

ASTM B6 – Slab Zinc

ASTM F567 – Installation of Chain Link Fence

ASTM F668 – Polyvinyl Chloride (PVC) and Other Organic Polymer-Coated Steel

Chain Link Fence Fabric, Class 2b

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 B

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 vinyl coating is thermally bonded to a thermoset bonding layer over a galvanized steel wire. This process ensures a tightly adherent 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 2b. Federal Specification RR-F-191/1E Type IV, and AASHTO M-181 Type IV, Class B, 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 in. (50 mm) mesh, under 72 in. (1,830 mm) is knuckled at both selvages; fabric 72 in. (1,830 mm) high and over is knuckled at one selvage and twisted at the other. All fabrics woven into meshes under 2 in. (50 mm) have both selvages knuckled. Properties of PVC used for coating are in Table 3.

WIRE COATING

Only plasticized polyvinyl 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 coating resists attack from prolonged exposure to dilute solutions most common mineral acids, seawater, and dilute solutions of most salts and alkali. See Table 2. The PVC coated wire shall pass the test for adhesion contained in ASTM F668 for Class 2b 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.

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MAINTENANCE

Periodic inspection is recommended but no routine maintenance is required.

TECHNICAL SERVICES

Jamieson Fence Supply
Technical Sales Department
Phone: 800-527-6464
Fax: 214-337-2061
www.jamiesonfence.com

FUSED AND ADHERED

ASTM F668 Class 2b, Federal Specification RR-F-191/1E Type IV, AASHTO M-181 Type IV, Class B

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, MIN.		TENSILE STRENGTH, MIN.	
GAGE	INCH	MM	GAGE	INCH	MM	OZ/FT²	G/M²	INCH	MM	LBF	NEWTONS	KSI	MPA
6	0.192	4.88	5	±0.005	±0.13	0.40	122	0.006 to 0.010	0.15 to 0.25	2,170	9,650	75	515
9	0.148	3.76	8	±0.005	±0.13	0.30	92			1,290	5,740	75	515
10	0.135	3.43	9	±0.005	±0.13	0.30	92			1,290	5,740	90	620
11	0.120	3.05	10	±0.005	±0.13	0.30	92			850	3,780	75	515
12	0.105	2.67	11	±0.004	±0.10	0.30	76			650	2,890	75	515
14	0.080	2.03	13	±0.004	±0.10	0.25	76			380	1,690	75	515

Note: Core wire sizes less than 0.120 in. (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 INCH	FINISHED WIRE GAGE	FABRIC WIRE HEIGHT INCH	SELVAGE: K- KNUCKLED, T-TWISTED/BARBED	ROLL SIZE FT
2"	5	36" – 240"	KK only	25'
2"	8, 9, 10	36" – 240"	KK, KT, TT	50'
1 3/4"	8, 9, 10	36" – 240"	KK only	25'
1"	8, 9, 10	36" – 144"	KK only	25'
Maximum Security Mesh				
5/8"	8, 9, 10	36" – 120"	KK only	25'
5/8"	11, 13	36" – 72"	KK only	25'
1/2"	9, 10	36" – 96"	KK only	25'
1/2"	11, 13	36" – 96"	KK only	25'
3/8"	10	36" – 96"	KK only	25'
3/8"	13	36" – 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, lb.	BELL LABS	1,500
Accelerated Aging Test	ASTM D 1499	1,500 hrs at 145° F