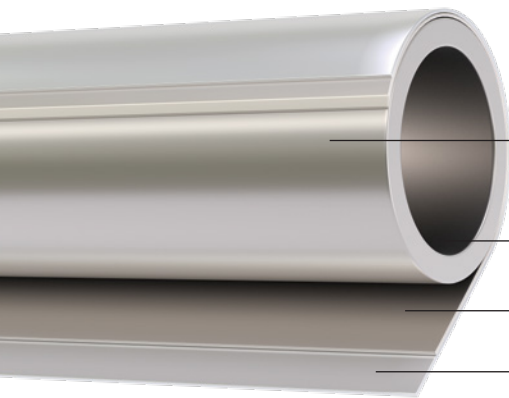


PG-40 Pre-galvanized Steel Fence Framework

Submittal Data Sheet

High-strength Spec Fence Framework

The strength and corrosion characteristics of Wheatland PG-40 fence pipe are tested, documented and certified as required to ensure complete compliance with ASTM F1043, Group IC, and AASHTO M181. Wheatland PG-40 fence framework meets or exceeds the most demanding specifications and codes imposed by private, independent and government agencies.



Wheatland PG-40 fence framework offers protection against corrosion and white rust.

- **Hot-rolled steel** provides a minimum yield strength of 50,000 psi
- **Continuous galvanized coating** is applied to interior and exterior surfaces
- **Clear polymer coating** seals in protection, and provides a smooth, lustrous finish

Materials

- 1. Steel** — Steel strip used in the manufacture of Wheatland PG-40 fence pipe will meet or exceed all performance criteria set forth in this standard specification.
- 2. Zinc Coating** — Pre-galvanized steel is specified to meet the requirements of ASTM F1043, Group IC.
- 3. Clear Polymer Coating** — A clear polymer coating shall be applied over the intermediate conversion coating. This polymer coating provides a smooth, lustrous protective finish.
- 4. Heat-set Internal Coating** — A heat-set zinc-rich ID coating shall have a minimum zinc loading of 90%.

Weight of Coatings

- 1. Zinc** — Weight of zinc shall be 1.8 oz./ft.² minimum per ASTM 653, G185.
- 2. Polymer Coating** — Thickness of the clear polymer coating shall be 0.4 mils +/- 0.1 mils and shall be determined by measurement with a suitable magnetic or eddy current coating thickness tester.

Strength Characteristics

- 1. Load Strength** — The strength of line, end, corner and pull posts shall be determined by the use of 4' or 6' cantilevered bend test. The top rail shall be determined by a 10' free-supported beam test.
- 2. Bending Moment** — Pipe strength may be determined via the alternative method of calculating bending moment. (See table.) Conformance can be demonstrated by measuring the yield strength multiplied by the section modulus. The yield strength shall be determined according to the methods described in ASTM E8. For materials under this specification, the 0.2 offset method shall be used in determining yield strength.

Corrosion Resistance

1. Salt Spray

a. *Exterior Surface*—The exterior clear polymer coating shall have a demonstrated ability to resist 1,000 hours or more of exposure to salt fog with a maximum of 5% red rust. Tests shall be conducted in accordance with ASTM B117.

b. *Interior Surface*—The interior zinc-rich surface coating shall withstand no less than 650 hours of exposure to salt fog with a maximum of 5% red rust. Tests shall be conducted in accordance with ASTM B117.

2. Humidity—The exterior clear polymer coating of Wheatland PG-40 fence pipe shall resist 500 hours of exposure to 100% relative humidity without signs of blistering or peeling. Tests shall be performed in accordance with ASTM D4585 (D2247).

3. Weatherometer—The clear polymer coating of Wheatland PG-40 fence pipe shall resist failure for no less than 500 hours at a black panel temperature of no less than 145° F. Tests shall be performed in accordance with ASTM G155 Xenon Type BH apparatus.

Specifying Agencies

- American Association of State Highway and Transportation Officials (AASHTO) M181, Grade 2
- Federal specifications RR-F-191/2E and RR-F-191/3E
- U.S. Army Corps of Engineers UFGS-32 31 13
- Department of the Navy
- Federal Highway Administration
- Federal Aviation Administration AC 150/5370-10 Item 162
- U.S. Department of Justice—Federal Bureau of Prisons
- ASTM Specification F1043 Group IC Standard Specification for Strength and Protective Coatings on Steel Industrial Chain Link Fence Framework
- American Institute of Architects (AIA) MasterSpec®

Availability

Wheatland Tube is committed to a full complement of finished inventory. Our high-speed material-handling capabilities enable us to react to special length requests with exceptional order fill rates.

PG-40 DIMENSIONS AND STRENGTH CHARACTERISTICS

FENCE INDUSTRY	DECIMAL OD EQUIVALENT		PIPE WALL THICKNESS		WEIGHT		SECTION MODULUS		X	MIN. YIELD STRENGTH		=	MAX. BENDING MOMENT	CALCULATED LOAD (LBS.)		
	in.	(mm)	in.	(mm)	lb./ft.	(kg/m)	in. ³	(mm ³)		psi	(MPa)			lb./in.	10' Free Supported	Cantilever
OD														4'	6'	
1½"	1.660	42.16	0.111	2.82	1.84	2.74	0.1962	4.98	x	50000	345	=	9810	327	204	136
1¾"	1.900	48.26	0.120	3.05	2.28	3.39	0.2810	7.14	x	50000	345	=	14050	468	293	195
2¾"	2.375	60.33	0.130	3.30	3.12	4.64	0.4881	12.40	x	50000	345	=	24405	814	508	339

Specifications, illustrated material and descriptions are accurate as known at time of publication and are subject to change without notice.

SUBMITTAL INFORMATION

PROJECT:

CONTRACTOR:

DATE:

ENGINEER:

SPECIFICATION REFERENCE:

SYSTEM TYPE:

LOCATIONS:

COMMENTS:



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