

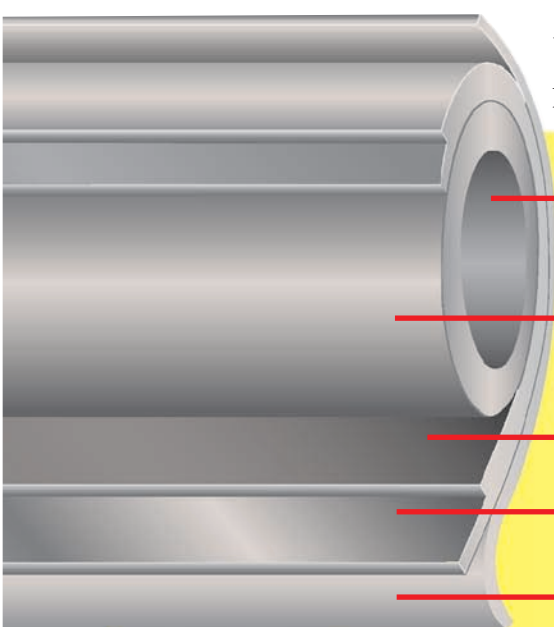
WT-40

Wheatland WT-40 Delivers High Strength Spec Fence Framework

The strength and corrosion characteristics of Wheatland WT-40 fence pipe have been tested, documented and certified by independent testing agencies to ensure complete compliance with AASHTO M181. Wheatland WT-40 fence framework meets or exceeds the most demanding specifications and codes imposed by private, independent and government agencies.



Wheatland WT-40 fence framework offers four-way protection against corrosion and white rust.

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- **Zinc-rich interior coating** protects against the condensation build-up that causes pipe to rust from the inside
 - **Cold rolled, high strength steel** provides a minimum yield strength of 50,000 psi
 - **Continuous hot dip galvanized coating**
 - **Intermediate conversion coating** inhibits white rust
 - **UV clear polymeric coating** seals in protection, and provides a smooth, lustrous finish

WT-40 Fence Framework



WT-40 Technical Specifications

Scope

This specification covers WT-40 galvanized steel fence pipe as manufactured by Wheatland Tube Company, Fence Division.

Materials

1. Steel

Steel strip used in the manufacture of Wheatland WT-40 Fence Pipe shall conform to ASTM A569 to A1011 and will meet or exceed all performance criteria set forth in this standard specification. Steel shall be cold rolled with a minimum yield strength of 50,000 psi.

2. Zinc

Zinc used in Wheatland WT-40 Fence Pipe shall be high grade and special high grade zinc conforming to ASTM B 6. Galvanizing shall be continuous hot dip on O.D.

3. Intermediate Conversion

An intermediate conversion coating shall be applied in-line over the continuous hot dip galvanizing coating to inhibit white rust and enhance corrosion resistance.

4. Clear Polymeric Coating

A UV clear polymeric coating shall be applied over the intermediate conversion coating. This polymeric coating shall provide a smooth, lustrous protective finish.

5. Internal Coating

A zinc-rich I.D. coating shall have a minimum zinc loading of 90%, and shall have the capability of protecting against condensation build-up, thus preventing internal rusting.

Weight of Coatings

1. Zinc

Weight of zinc shall be 1.0 oz./ft.² +/- 0.1 oz./ft.² and shall be determined by the method described in ASTM A 90.

2. Intermediate Conversion

Intermediate conversion coatings shall be 30 microgram/in.² +/- 10 micrograms/in.² and shall be determined by a strip and weigh method utilizing an atomic absorption spectrophotometer or X-ray fluorescence spectrograph.

3. Polymeric Coating

Thickness of the clear polymeric coating shall be .5 mils +/- 0.2 mils and shall be determined by measurement with a suitable magnetic or eddy current coating thickness tester.



WT-40 Dimensions and Strength Characteristics

Fence Industry	Decimal O.D. Equivalent		Pipe Wall Thickness		Weight		Section Modulus		x	Min. Yield Strength		=	Max Bending Moment	Calculated Load (lbs)		
	O.D.	inches	(mm)	inches	(mm)	lb/ft	(kg/m)	inches		(mm)	psi			(Mpa)	=	lb. in.
															4'	6'
1 3/8"	1.315	33.40	0.104	2.64	1.35	2.01	0.1111	2.82	x	50000	345	=	5555	185	116	77
1 5/8"	1.660	42.16	0.111	2.82	1.84	2.74	0.1962	4.98	x	50000	345	=	9810	327	204	136
2"	1.900	48.26	0.120	3.05	2.28	3.39	0.2810	7.14	x	50000	345	=	14050	468	293	195
2 1/2"	2.375	60.33	0.130	3.30	3.12	4.64	0.4881	12.40	x	50000	345	=	24405	814	508	339
3"	2.875	73.03	0.160	4.06	4.64	6.91	0.8778	22.30	x	50000	345	=	43890	1463	914	610
3 1/2"	3.500	88.90	0.160	4.06	5.71	8.50	1.3408	34.06	x	50000	345	=	67042	2235	1397	931
4"	4.000	101.60	0.160	4.06	6.57	9.78	1.7820	45.26	x	50000	345	=	89098	2970	1856	1237

6 5/8" and 8 5/8" Full Weight Schedule 40 is available for terminal post applications.

Strength Characteristics

1. Load Strength

The strength of line, end, corner and pull posts shall be determined by the use of 4 foot or 6 foot cantilevered beam test. The top rail shall be determined by a 10 foot free-supported beam test (see table above).

2. Bending Moment

Pipe strength may be determined via the alternative method of calculating bending moment (see table above). 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 E 8. 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 UV Polymeric coating shall have a demonstrated ability to resist 1000 hours or more of exposure to salt fog with a maximum of 5% red rust. Tests shall be conducted in accordance with ASTM B 117.

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 B 117.

2. Humidity

The exterior UV polymeric coating of Wheatland WT-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 D 4585 (D 2247).

3. Weatherometer

The UV polymeric coating of Wheatland WT-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 G 26, Xenon Type BH apparatus, or ASTM G 23 (Carbon Arc) Type HH apparatus.

Availability

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



CERTIFICATION

Wheatland Tube Company will certify that all Wheatland WT-40 pipe is manufactured in the USA and is in compliance with applicable local, state and federal specifications. **“WT-40 MADE IN USA”** is proudly displayed on each length of WT-40 pipe.

Specifying Agencies

Wheatland WT-40 meets or exceeds the following code certifications:

- American Associations of State Highway and Transportation Officials AASHTO M181
- Federal Specifications RR-F-191/2D and RR-F-191/3D
- Corps of Engineers CE65-02831
- Department of the Navy NFGS-02831
- Department of Transportation Federal Aeronautics Administration AC150/5370-10A ITEM F-162
- U.S. Department of Justice - Federal Bureau of Prisons
- ASTM Specification F-1043 Standard Specification for Strength and Protective Coatings
- American Institute of Architects (AIA) MASTERSPEC

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



Wheatland Tube Company

DIVISION OF JOHN MANELY COMPANY

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