

# ASTM F1083 Schedule 40 Pipe

## Submittal Data Sheet

### Scope

This submittal data sheet covers 2 grades of ASTM F1083 hot-dipped galvanized schedule 40 welded steel pipe for fence structures, Regular Grade and High Strength Grade. The accompanying tables show the different Grades have the same dimensions, wall thickness, weight per linear foot, galvanized coating and tolerances. The Grade signifies the yield strength of the schedule 40 pipe.

### Hot-Dipped Galvanized

Pipe shall be coated inside and out by the hot-dip process. The average weight of zinc coating shall be not less than 1.8 oz/ft<sup>2</sup> of the outside surface and 1.8 oz/ft<sup>2</sup> of the inside surface. A 2.0 oz/ft<sup>2</sup> zinc coating weight is available upon request. A conversion coating is also applied to the interior and exterior surfaces to protect against corrosion and white rust.

Wheatland’s zinc coating is virtually lead free.

### End Finish

End finish shall be plain end square cut.

Posts and rails shall be one piece free of welded sections.

### Tensile Requirements

Tensile Strength, min.	48,000 psi
Yield Strength, min.	30,000 psi
High Strength Grade – Tensile Strength, min.	60,000 psi
High Strength Grade – Yield Strength, min.	50,000 psi

### Permissible Variations in Wall Thickness

Minimum wall thickness at any point shall not be more than 12.5% under nominal wall thickness specified.

### Permissible Variations in Outside Diameter

1.900" O.D. and under	+ 0.016"–0.031"
2.375" O.D. and over	± 1%

Wheatland offers the most extensive size range of any fence framework manufacturer.

### Permissible Variations in Weight Per Foot

Pipe shall not vary more than ± 10% from the standard specified.

### Product Marking

Each length of pipe 1.315" O.D. and larger is continuously stenciled as follows:

Wheatland, USA, Size, Schedule 40, ASTM F1083, 1.8 oz. or 2.0 oz., Grade, Length, Run #, and Date

Bar Coding is acceptable as a supplementary identification method.

### Wheatland F1083 Schedule 40 Galvanized Pipe meets or exceeds the following specifications:

- American Association of State Highway and Transportation Officials AASHTO M181—Grade 1
- 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
- Department of Transportation
- Federal Aviation Administration AC 150/5370-10 Item 162
- U.S. Department of Justice—Federal Bureau of Prisons
- ASTM Specification F1043 Group 1A Standard Specification for Strength and Protective Coatings
- American Institute of Architects (AIA) MasterSpec®
- ASTM Specification F1083

## SUBMITTAL INFORMATION

PROJECT:

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CONTRACTOR:

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DATE:

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ENGINEER:

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SPECIFICATION REFERENCE:

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SYSTEM TYPE:

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LOCATIONS:

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COMMENTS:

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**ASTM F1083 Regular Grade 30,000 PSI Yield  
Schedule 40 Pipe – 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.)				
	OD	in.	(mm)	in.	(mm)	lb./ft.	(kg/m)	in. <sup>3</sup>		(mm <sup>3</sup> )	psi			(MPa)	lb./in.	10' Free Supported	Cantilever	
																	4'	6'
1½"	1.315	33.40	0.133	3.38	1.68	2.50	0.1328	3.37	x	30000	205	=	3985	133	83	55		
1½"	1.660	42.16	0.140	3.56	2.27	3.38	0.2346	5.96	x	30000	205	=	7038	235	147	98		
1¾"	1.900	48.26	0.145	3.68	2.72	4.05	0.3262	8.29	x	30000	205	=	9786	326	204	136		
2¾"	2.375	60.33	0.154	3.91	3.65	5.43	0.5606	14.24	x	30000	205	=	16819	561	350	234		
2¾"	2.875	73.03	0.203	5.16	5.80	8.62	1.0640	27.03	x	30000	205	=	31921	1064	665	443		
3½"	3.500	88.90	0.216	5.49	7.58	11.28	1.7241	43.79	x	30000	205	=	51723	1724	1078	718		
4"	4.000	101.60	0.226	5.74	9.12	13.56	2.3939	60.80	x	30000	205	=	71816	2394	1496	997		
4½"	4.500	114.30	0.237	6.02	10.80	16.07	3.2145	81.65	x	30000	205	=	96435	3214	2009	1399		
*5¾"	5.563	141.30	0.258	6.55	14.63	21.77	5.4511	138.46	x	35000	240	=	190789	6359	3975	2650		
*6¾"	6.625	168.28	0.280	7.11	18.99	28.23	8.4958	215.79	x	35000	240	=	297353	9912	6195	4130		
*8¾"	8.625	219.08	0.322	8.18	28.58	42.49	16.8091	426.95	x	35000	240	=	588319	19610	12257	8171		

\*Manufactured to ASTM A53 specifications; exceeds F1083 requirements.

**ASTM F1083 High Strength Grade 50,000 PSI Yield  
Schedule 40 Pipe – 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.)				
	OD	in.	(mm)	in.	(mm)	lb./ft.	(kg/m)	in. <sup>3</sup>		(mm <sup>3</sup> )	psi			(MPa)	lb./in.	10' Free Supported	Cantilever	
																	6'	15'
1½"	1.660	42.16	0.140	3.56	2.27	3.38	0.2346	5.96	x	50000	345	=	11730	392	163	65		
1¾"	1.900	48.26	0.145	3.68	2.72	4.05	0.3262	8.29	x	50000	345	=	16310	543	227	91		
2¾"	2.375	60.33	0.154	3.91	3.65	5.43	0.5606	14.24	x	50000	345	=	28030	935	389	156		
2¾"	2.875	73.03	0.203	5.16	5.80	8.62	1.0640	27.03	x	50000	345	=	53200	1773	739	296		
3½"	3.500	88.90	0.216	5.49	7.58	11.28	1.7241	43.79	x	50000	345	=	86205	2873	1197	479		
4"	4.000	101.60	0.226	5.74	9.12	13.56	2.3939	60.80	x	50000	345	=	119695	3990	1662	665		
4½"	4.500	114.30	0.237	6.02	10.80	16.07	3.2145	81.65	x	50000	345	=	160725	5357	2232	893		
5¾"	5.563	141.30	0.258	6.55	14.63	21.77	5.4511	138.46	x	50000	345	=	272555	9085	3785	1514		
6¾"	6.625	168.28	0.280	7.11	18.99	28.23	8.4958	215.79	x	50000	345	=	424790	14160	5900	2360		
8¾"	8.625	219.08	0.322	8.18	28.58	42.49	16.8091	426.95	x	50000	345	=	840455	28015	11673	4669		

Please contact Fence Sales for mill run schedule. Minimum order quantities may be required. Specifications, illustrated material and descriptions are accurate as known at time of publication and are subject to change without notice.