

ASTM F1083 Schedule 40 Pipe

Submittal Data Sheet

Scope

This submittal data sheet covers two grades of ASTM F1083 hot-dipped galvanized Schedule 40 welded steel pipe for fence structures, Regular Grade and High Strength. 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/ft² of the outside surface and 1.8 oz/ft² of the inside surface. A 2.0 oz/ft² 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 No. 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:

CONTRACTOR:

DATE:

ENGINEER:

SPECIFICATION REFERENCE:

SYSTEM TYPE:

LOCATIONS:

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. ³ | | (mm ³) | psi | | | (MPa) | 10' Free Supported | Cantilever | |
| | | | | | | | | | | | | | | | 4' | 6' | |
| | 1 1/8" | 1.315 | 33.40 | 0.133 | 3.38 | 1.68 | 2.50 | 0.1328 | 3.37 | x | 30000 | 205 | = | 3985 | 133 | 83 | 55 |
| | 1 1/2" | 1.660 | 42.16 | 0.140 | 3.56 | 2.27 | 3.38 | 0.2346 | 5.96 | x | 30000 | 205 | = | 7038 | 235 | 147 | 98 |
| | 1 3/4" | 1.900 | 48.26 | 0.145 | 3.68 | 2.72 | 4.05 | 0.3262 | 8.29 | x | 30000 | 205 | = | 9786 | 326 | 204 | 136 |
| | 2 3/8" | 2.375 | 60.33 | 0.154 | 3.91 | 3.65 | 5.43 | 0.5606 | 14.24 | x | 30000 | 205 | = | 16819 | 561 | 350 | 234 |
| | 2 7/8" | 2.875 | 73.03 | 0.203 | 5.16 | 5.80 | 8.62 | 1.0640 | 27.03 | x | 30000 | 205 | = | 31921 | 1064 | 665 | 443 |
| | 3 1/2" | 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 |
| | 4 1/2" | 4.500 | 114.30 | 0.237 | 6.02 | 10.80 | 16.07 | 3.2145 | 81.65 | x | 30000 | 205 | = | 96435 | 3214 | 2009 | 1399 |
| | *5 5/8" | 5.563 | 141.30 | 0.258 | 6.55 | 14.63 | 21.77 | 5.4511 | 138.46 | x | 35000 | 240 | = | 190789 | 6359 | 3975 | 2650 |
| | *6 3/8" | 6.625 | 168.28 | 0.280 | 7.11 | 18.99 | 28.23 | 8.4958 | 215.79 | x | 35000 | 240 | = | 297353 | 9912 | 6195 | 4130 |
| | *8 3/8" | 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. ³ | | (mm ³) | psi | | | (MPa) | 10' Free Supported | Cantilever | |
| | | | | | | | | | | | | | | 6' | 15' | | |
| | 1 1/2" | 1.660 | 42.16 | 0.140 | 3.56 | 2.27 | 3.38 | 0.2346 | 5.96 | x | 50000 | 345 | = | 11730 | 392 | 163 | 65 |
| | 1 3/4" | 1.900 | 48.26 | 0.145 | 3.68 | 2.72 | 4.05 | 0.3262 | 8.29 | x | 50000 | 345 | = | 16310 | 543 | 227 | 91 |
| | 2 3/8" | 2.375 | 60.33 | 0.154 | 3.91 | 3.65 | 5.43 | 0.5606 | 14.24 | x | 50000 | 345 | = | 28030 | 935 | 389 | 156 |
| | 2 7/8" | 2.875 | 73.03 | 0.203 | 5.16 | 5.80 | 8.62 | 1.0640 | 27.03 | x | 50000 | 345 | = | 53200 | 1773 | 739 | 296 |
| | 3 1/2" | 3.500 | 88.90 | 0.216 | 5.49 | 7.58 | 11.28 | 1.7241 | 43.79 | x | 50000 | 345 | = | 86205 | 2873 | 1197 | 479 |
| | 4 1/2" | 4.500 | 114.30 | 0.237 | 6.02 | 10.80 | 16.07 | 3.2145 | 81.65 | x | 50000 | 345 | = | 160725 | 5357 | 2232 | 893 |
| | *5 5/8" | 5.563 | 141.30 | 0.258 | 6.55 | 14.63 | 21.77 | 5.4511 | 138.46 | x | 50000 | 345 | = | 272555 | 9085 | 3785 | 1514 |
| | *6 3/8" | 6.625 | 168.28 | 0.280 | 7.11 | 18.99 | 28.23 | 8.4958 | 215.79 | x | 50000 | 345 | = | 424790 | 14160 | 5900 | 2360 |
| | *8 3/8" | 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.

WFE-021819



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