

SUBMITTAL DATA

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ASTM A53 TYPE E GRADE A PIPE

SCOPE:

Covers black and hot-dipped galvanized electric-resistance-welded Grade A pipe. Pipe intended for mechanical and pressure applications and is acceptable for ordinary uses in steam, water, gas and air lines. SSV ASTM A53/A135/A795 is UL Listed and FM Approved, sizes 1-1/4” through 6” nominal for SCH10 and 8” x 0.188”, for use in Fire Sprinkler Pipe Applications. Pipe is suitable for welding, threading, grooving and bending. Pipe is not intended for flanging. Produced to latest revisions of ASTM A53/A 53M, Federal Specification WW-P404 and ASME B36.10M.

HOT-DIPPED GALVANIZED

The average weight of zinc coating shall be not less than 1.8 oz. per sq.ft. of surface (inside and outside) When galvanized pipe is bent or otherwise fabricated to a degree which causes zinc coating to stretch or compress beyond the limit of elasticity, some flaking of the coating may occur.

HYDROSTATIC TESTING

Hydrostatic test pressures for plain-end pipe are indicated below.

NPS	Light Weight- PSI	Standard Weight - PSI	Extra Strong Weight - PSI
1/2”		700	850
3/4”	2500	700	850
1”	2500	700	850
1-1/4”	2400	1200	1800
1-1/2”	2100	1200	1800
2”	1700	2300	2500
2-1/2”	1500	2500	2500
3”	1200	2220	2500
3-1/2”	1200	2030	2800
4”	1200	1900	2700
5”	1200	1670	2430
6”	1200	1520	2350
8”	1200	1340	2090

END FINISH

Plain End:

NPS 1-1/2 and smaller: unless otherwise specified on order, end finish shall be at the option of the manufacturer.

NPS 2 and larger: STD and SCH.80 weights: ends beveled to angle of 30⁰, +5⁰, -0⁰ with a root face of 1/16”±1/32”.

Threaded: To ANSI Standard B 1.20.1

Couplings: To ASTM Standard A 865.

CHEMICAL REQUIREMENTS

Composition, max. %

Carbon	Manganese	Phosphorus	Sulfur	*Copper	*Nickel	*Chromium	*Molybdenum	*Vanadium
.30	1.20	.05	.045	.40	.40	.40	.15	.08

*The combination of these five elements shall not exceed 1.00%

TENSILE REQUIREMENTS

Tensile Strength, min. 48 000 psi

Yield Strength, min. 30 000 psi

Elongation in 2" Refer to A 53 Table x 4.1, latest revision – ASTM A53/A 53M

BENDING TEST (COLD) FOR NPS 2 and UNDER:

Degree of Bend Diameter of mandrel

Standard 90⁰ 12 x outside pipe diameter

Close coiling 90⁰ 12 x outside pipe diameter

FLATTENING TEST – NPS 2-1/2 and GREATER

As a test for quality of the weld, position the weld at 90⁰ from the direction of force and flatten until the OD is ¾ of the original outside diameter. No cracks shall occur along the inside or outside surface of the weld.

DIMENSION and WEIGHTS

BLACK PLAIN END							
Nominal Size	OD Inches	Sch. 10		Sch. 40		Sch. 80	
		Wall Inches	Weight Lb./Ft	Wall Inches	Weight Lb./Ft	Wall Inches	Weight Lb./Ft
½"	.840			.109	.85	.147	1.09
¾"	1.050	.083	0.86	.113	1.13	.154	1.48
1"	1.315	.109	1.41	.133	1.68	.179	2.17
1-1/4"	1.660	.109	1.81	.140	2.27	.191	3.00
1-1/2"	1.900	.109	2.09	.145	2.72	.200	3.63
2"	2.375	.109	2.64	.154	3.66	.218	5.03
2-1/2"	2.875	.120	3.53	.203	5.80	.276	7.67
3"	3.500	.120	4.34	.216	7.58	.300	10.26
3-1/2"	4.000	.120	4.98	.226	9.12	.318	12.52
4"	4.500	.120	5.62	.237	10.80	.337	15.00
5"	5.563	.134	7.78	.258	14.63	.375	20.80
6"	6.625	.134	9.30	.280	18.99	.432	28.60
8"	8.625	0.188*	16.96	.322	28.58	.500	43.43

(*) Not Schedule 10.

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

NPS 1-1/2 and under $\pm 0.16''$

NPS 2 and over $\pm 1\%$

PERMISSIBLE VARIATIONS IN WEIGHT PER FOOT

Pipe shall not vary more than $\pm 10\%$ from the standard specified.

PRODUCT MARKING

Each length of pipe 1/2 NPS and larger is continuously stenciled to show the manufacturer, the grade of pipe (ASTM A 53), the kind of pipe (ERW for electric-resistance-welded, A for Grade A,) the size (Sch. 80 for extra strong), and length. Stencil markings indicate UL Listing and FM Approval for sizes 1-1/4" through 8" nominal for use in Fire Sprinkler Pipe Applications. Bar Coding is acceptable as a supplementary identification method.

All information contained herein is accurate as known the time of publication. SSV reserves the right to change product specifications without incurring obligations.