

# Allied ASTM A53 Pipe

## Standard Schedule 40 Pipe, Submittal Data Sheet

### Scope

Covers black and hot-dipped galvanized Type E (electric-resistance-welded) Grade B Pipe. It is intended for mechanical and pressure applications and is also acceptable for ordinary uses in steam, water, gas, and air lines. Allied ASTM A53 is produced in NPS 2 1/2" through 6" and is suitable for welding, threading and grooving. Allied ASTM A53 is produced according to the latest revision of ASTM A53/A53M, ASME SA-53, FM Approved, and UL certified.

### Materials and Manufacture

The steel for welded pipe shall be made by one or more of the following processes: open-hearth, electric- furnace, or basic-oxygen. The weld seam of electric-resistance-welded pipe is processed in such a manner that no untempered martensite remains.

### Chemical Composition

The steel shall conform to the requirements as to chemical composition (max %) given below (Table 1 of ASTM A53):

Carbon	Manganese	Phosphorous	Sulfur	
.30	1.20	.05	.045	
Copper*	Nickel*	Chromium*	Molybdenum*	Vanadium*
.50	.40	.40	.15	.08

\*The total combination for these five elements shall not exceed 1.00%

### Mechanical Properties

Tensile Requirements:

- Tensile strength, min, psi 60,000
- Yield strength, min, psi 35,000
- Elongation in 2 in. Refer to A53 Table X4.1

All tests that are required to be performed on Standard Sch 40, Type E, Grade B pipe products that are produced at Allied Tube will have those tests performed in accordance with ASTM A53, and they will be made available upon request, also in accordance with this specification.

### Hydrostatic Test

Hydrostatic inspection test pressures for plain-end pipe are performed in-line and maintained for a minimum of 5 seconds in accordance with ASTM A53 Table X2.2.

### Nondestructive Electric Test

Nondestructive electric (ultrasonic) testing is performed during the production of the A53 pipe as it is processed in accordance with ASTM A53.

### Permissible Variations in Weight (Mass) and Dimensions

#### Weight (Mass):

The weight (mass) of the pipe shall not vary more than +/- 10% from its specified weight (mass).

#### Diameter:

For pipe NPS 2" or larger, the outside diameter shall not vary more than +/- 1% from the specified outside diameter.

#### Thickness:

The minimum wall thickness at any point shall not be more than 12.5% under the specified wall thickness. The minimum wall thickness on inspection shall conform to the requirements given in ASTM A53 Table X2.4.

### Standard Schedule 40 ASTM A53 Type E Grade B (Black Plain-End)

NPS	O.D. Inches	Nominal Wall	Wt/Ft
2-1/2"	2.875	0.203	5.80
3"	3.500	0.216	7.58
3-1/2"	4.000	0.226	9.12
4"	4.500	0.237	10.80
5"	5.563	0.258	14.63
6"	6.625	0.280	18.99

### End Finish

Plain-end pipe of standard weight and NPS 2 1/2" and larger, shall be plain-end beveled to an angle of 30°, +5°, -0° and with a root face of 1/16 in. +/- 1/32 in.

### Galvanized Pipe

Galvanized pipe will be produced upon request to meet the standards as outlined in Section 18 of ASTM A53.

### Product Marking

Each length of pipe shall be legibly marked to show the following: Manufacturer's name or mark (Allied Tube), Specification number (A53), Size, Grade (B), Type (E), FM, and UL.



Project: \_\_\_\_\_

Contractor: \_\_\_\_\_

Date: \_\_\_\_\_

Engineer: \_\_\_\_\_

Specification Reference: \_\_\_\_\_

System Type: \_\_\_\_\_

Locations: \_\_\_\_\_

Comments: \_\_\_\_\_



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