

ASTM A795 ERW steel pipe

ASTM A795 ERW steel pipe from TPMC is produced by high-frequency welding of steel strip, featuring a longitudinal weld seam, precise dimensions and lightweight construction.

UL Listed and FM Approved, it features tight dimensional tolerances to ensure excellent compatibility with precision fittings and grooved connections.

Available in SCH10 for cost-effective branch lines and SCH40 for mains, risers, or high-durability needs, our TPMC pipe provides reliable performance in wet, dry, deluge, and preaction fire protection systems.



- Certificate: UL Listed / FM Approved
- Standard: ASTM A795 Type E Grade B / UL 852 / NFPA 13 / NFPA 14
- Length: 6m / 5.8m / 11.8m / 12m / 20ft, etc.
- End: Plain: square cut
Beveled: 37.5° angle per ASME B16.25
Roll-grooved: per AWWA C606
Threaded (NPT): per ASME B1.20.1
Threaded (BSPT): per ISO 7-1 / BS 21
- Surface: FBE / polyester resin powder
Water-based red or black paint
Hot-dip galvanized / duplex coating
Plastic lining (PE, UPVC, etc.)

Available sizes for Schedule 10 pipe (Light-weight)

Outside diameter		Wall thickness		Weight	Test pressure	Ref. No.	
NPS	DN	OD (mm)	Schedule No.				T (mm)
3/4"	20	26.7	SCH10	2.11	1.28	4.8	P0202-SCH10 (UL/FM)
1"	25	33.4	SCH10	2.77	2.09	4.8	P0203-SCH10 (UL/FM)
1-1/4"	32	42.2	SCH10	2.77	2.69	6.9	P0204-SCH10 (UL/FM)
1-1/2"	40	48.3	SCH10	2.77	3.11	6.9	P0205-SCH10 (UL/FM)
2"	50	60.3	SCH10	2.77	3.93	6.9	P0206-SCH10 (UL/FM)
2-1/2"	65	73.0	SCH10	3.05	5.26	6.9	P0207-SCH10 (UL/FM)
3"	80	88.9	SCH10	3.05	6.46	6.9	P0208-SCH10 (UL/FM)
4"	100	114.3	SCH10	3.05	8.37	8.3	P0209-SCH10 (UL/FM)
5"	125	141.3	SCH10	3.40	11.58	8.3	P0210-SCH10 (UL/FM)
6"	150	168.3	SCH10	3.40	13.85	6.9	P0211-SCH10 (UL/FM)
8"	200	219.1	/	4.78	25.26	5.5	P0212-SCHXX (UL/FM)
10"	250	273.1	/	4.78	31.62	4.8	P0213-SCHXX (UL/FM)

Note: For NPS 8" and NPS 10", the nominal wall thickness tabulated in ASTM A795-2021 is 4.78 mm, which differs from ASME B36.10-2022 SCH10 (NPS 8": 3.76 mm; NPS 10": 4.19 mm). A795 uses a custom/engineered thickness for these sizes.

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Available sizes for Schedule 40 pipe (Standard-weight)

Outside diameter			Wall thickness		Weight	Test pressure	Ref. No.
NPS	DN	OD (mm)	Schedule No.	T (mm)	kg/m	MPa, min	
1/2"	15	21.3	SCH40	2.77	1.27	4.8	P0201-SCH40 (ISO)
3/4"	20	26.7	SCH40	2.87	1.69	4.8	P0202-SCH40 (ISO)
1"	25	33.4	SCH40	3.38	2.50	4.8	P0203-SCH40 (UL/FM)
1-1/4"	32	42.2	SCH40	3.56	3.39	6.9	P0204-SCH40 (UL/FM)
1-1/2"	40	48.3	SCH40	3.68	4.05	6.9	P0205-SCH40 (UL/FM)
2"	50	60.3	SCH40	3.91	5.45	6.9	P0206-SCH40 (UL/FM)
2-1/2"	65	73.0	SCH40	5.16	8.64	6.9	P0207-SCH40 (UL/FM)
3"	80	88.9	SCH40	5.49	11.29	6.9	P0208-SCH40 (UL/FM)
4"	100	114.3	SCH40	6.02	16.09	8.3	P0209-SCH40 (UL/FM)
5"	125	141.3	SCH40	6.55	21.79	8.3	P0210-SCH40 (UL/FM)
6"	150	168.3	SCH40	7.11	28.29	8.3	P0211-SCH40 (UL/FM)
8"	200	219.1	SCH30	7.04	36.82	8.3	P0212-SCH30 (UL/FM)
10"	250	273.0	SCH30	7.80	51.05	6.9	P0213-SCH30 (UL/FM)

Note: For NPS 8" and NPS 10", the nominal wall thickness tabulated in ASTM A795-2021 aligns with ASME B36.10-2022 SCH30 (not SCH40: NPS 8": 8.18 mm; NPS 10": 9.27 mm).

Chemical composition (%) per ASTM A795 Type E Grade B

C	Mn	P	S
≤ 0.30	≤ 1.20	≤ 0.035	≤ 0.035

Mechanical properties per ASTM A795 Type E Grade B

Tensile strength	Yield strength	Longitudinal elongation
≥ 60000 psi (415 MPa)	≥ 35000 psi (240 MPa)	20% ~ 30%

Note: ASTM A795 does not specify numerical mechanical requirements. TPMC references ASTM A53 Type E Grade B for the typical values listed above.

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Standard requirements

- Post-weld heat treatment: The weld seam of Grade B ERW pipe shall be heat-treated after welding to a minimum of 1000°F (540°C), or processed equivalently, to ensure no untempered martensite remains.
- Flattening test: Three-stage cold flattening: to 2/3 OD (weld ductility, no cracks); to 1/3 OD (base metal ductility, no cracks); continued to walls meeting (soundness, no prior lamination/unsoundness).
- Hydrostatic test: Each pipe is subjected to a hydrostatic test at the specified pressure, with no leakage through the pipe wall.

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Nondestructive electric test (NDE)

- As an alternative to the hydrostatic test and when accepted by the purchaser, each pipe may be examined using nondestructive electric test (NDE) in accordance with any of the following Practices:
 - ASTM E213 (ultrasonic),
 - ASTM E309 (eddy current),
 - ASTM E570 (flux leakage).



Dimensional tolerances

- Outside diameter: $\pm 1/64$ " (0.41 mm) for NPS $\leq 1-1/2$ ", $\pm 1\%$ for NPS ≥ 2 ".
- Wall thickness: Minimum not more than 12.5% under nominal (no upper limit).
- Cut length: $+1/4$ " (6.4 mm) / -0 " per ASTM A530 (for specified length).
- Weight: $\pm 5\%$; measured per bundle for NPS ≤ 4 ", per individual length for NPS > 4 ".



Other quality assurance

- Straightness: Reasonably straight.
- Coating inspection: DFT and adhesion (see TPMC PA11-PA51).
- Marking: Legibly marked per standard (see TPMC PA71).
- Packaging: End protection, bundling, and shipping marks (see TPMC PA81).
- Test certificate: Issued by TPMC with full traceability to MTC/MTR.