

AS1074 ERW steel tube

ERW steel tube is formed by rolling strip and welding the seam, with tighter dimensional tolerances and less weight. The weld seam is heat treated after welding that no untempered martensite remains, and the weld flash can be removed from both inner and outer surfaces.

AS1074 is a non-alloy steel tubes specification covering ERW tube suitable for welding and threading. It is used for the conveyance of fluid for fire protection pipeline, water pipeline (Cold & hot), HVAC pipeline, etc.



- Certificate: FM Approved
- Standard: AS1074
- Length: 6m / 5.8m / 6.5m / 11.8m / 12m / 20ft, etc.
- End: Plain (square cut) / beveled to 30° / roll groove as ISO 6182-12 / BSPT thread as ISO 7-1 / NPT thread as ANSI B1.20.1
- Surface: Fusion bonded epoxy (FBE) / polyester resin / hot dip galvanized / red paint / black paint, etc.

Available size for Heavy series

Size				Thickness	Mass for plain end	Mass for screwed & socketed	Test pressure	Ref. No.
Inch	DN	Min OD (mm)	Max OD (mm)	T (mm)	kg/m	kg/m	MPa	
1/2"	15	21.1	21.7	3.2	1.44	1.45	5.0	P0901 (ISO)
3/4"	20	26.6	27.2	3.2	1.87	1.88	5.0	P0902 (ISO)
1"	25	33.4	34.2	4.0	2.94	2.96	5.0	P0903 (ISO)
1-1/4"	32	42.1	42.9	4.0	3.80	3.83	5.0	P0904 (ISO)
1-1/2"	40	48.0	48.8	4.0	4.38	4.42	5.0	P0905 (ISO)
2"	50	59.8	60.8	4.5	6.19	6.26	5.0	P0906 (ISO)
2-1/2"	65	75.4	76.6	4.5	7.93	8.05	5.0	P0907 (ISO)
3"	80	88.1	89.5	5.0	10.30	10.50	5.0	P0908 (ISO)
4"	100	113.3	114.9	5.4	14.50	14.80	5.0	P0909 (ISO)
5"	125	138.7	140.6	5.4	17.90	18.40	5.0	P0910 (ISO)
6"	150	164.1	166.1	5.4	21.30	21.90	5.0	P0911 (ISO)

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Available size for Medium series

Size				Thickness	Mass for plain end	Mass for screwed & socketed	Test pressure	Ref. No.
Inch	DN	Min OD (mm)	Max OD (mm)	T (mm)	kg/m	kg/m	MPa	
1/2"	15	21.1	21.7	2.6	1.21	1.22	5.0	P0921 (FM)
3/4"	20	26.6	27.2	2.6	1.56	1.57	5.0	P0922 (FM)
1"	25	33.4	34.2	3.2	2.41	2.43	5.0	P0923 (FM)
1-1/4"	32	42.1	42.9	3.2	3.10	3.13	5.0	P0924 (FM)
1-1/2"	40	48.0	48.8	3.2	3.57	3.61	5.0	P0925 (FM)
2"	50	59.8	60.8	3.6	5.03	5.10	5.0	P0926 (FM)
2-1/2"	65	75.4	76.6	3.6	6.43	6.55	5.0	P0927 (FM)
3"	80	88.1	89.5	4.0	8.37	8.54	5.0	P0928 (FM)
4"	100	113.3	114.9	4.5	12.20	12.50	5.0	P0929 (FM)
5"	125	138.7	140.6	5.0	16.60	17.10	5.0	P0930 (FM)
6"	150	164.1	166.1	5.0	19.70	20.30	5.0	P0931 (FM)

Available size for Light series

Size				Thickness	Mass for plain end	Mass for screwed & socketed	Test pressure	Ref. No.
Inch	DN	Min OD (mm)	Max OD (mm)	T (mm)	kg/m	kg/m	MPa	
1/2"	15	21.0	21.4	2.0	0.95	0.96	5.0	P0941 (ISO)
3/4"	20	26.4	26.9	2.3	1.38	1.39	5.0	P0942 (ISO)
1"	25	33.2	33.8	2.6	1.98	2.00	5.0	P0943 (ISO)
1-1/4"	32	41.9	42.5	2.6	2.54	2.57	5.0	P0944 (ISO)
1-1/2"	40	47.8	48.4	2.9	3.23	3.27	5.0	P0945 (ISO)
2"	50	59.6	60.2	2.9	4.08	4.15	5.0	P0946 (ISO)
2-1/2"	65	75.2	76.0	3.2	5.71	5.83	5.0	P0947 (ISO)
3"	80	87.9	88.7	3.2	6.72	6.89	5.0	P0948 (ISO)
4"	100	113.0	113.9	3.6	9.75	10.00	5.0	P0949 (ISO)

Note: Dimension and mass meet ISO 65 Light series 2.

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Chemical compositions (%) and Mechanical properties

C	Mn	P	S	Cu	Ni	Cr	Mo	V
≤ 0.40	≤ 1.40	≤ 0.045	≤ 0.045	-	-	-	-	-
Tensile strength (MPa)			Upper Yield strength (MPa)			Elongation (%)		
320-460			≥ 195			≥ 20		



Leak tightness test

- Each tube (before threading, if applicable) shall be tested for leak-tightness.
- The test can be a hydrostatic test at a minimum of 50 bar for at least 5 s.
- An electro-magnetic test is alternative in accordance with EN 10246-1, including eddy current method, or flux leakage method.



Other tests

- Tensile test, bending test and flattening test.
- Dimensional inspection: outer diameter, thickness, length.
- Straightness: The finished pipe shall be reasonably straight. For tube ≥ DN25, the tube length L shall not exceed 0.002 L.
- Ovality (out of roundness): The tolerance on out of roundness is included in the OD tolerance.
- Visual examination / coating test.
- Quantity and weight measurement.