347 Stainless Steel Tube

Smiths Advanced Metals

Corrosion Resistance & Weldability

Niobium-stabilised stainless steel tube.



347 stainless steel tube to BS T66 and BS T72 is a niobium-stabilised 18/10 chromium-nickel austenitic steel, with good corrosion resistance and good weldability.

Niobium prevents chromium carbide forming during welding and high temperature service, so the tube resists intergranular corrosion.

BS T66 is the British aerospace standard for seamless 347 tube, and BS T72 covers tube for hydraulic purposes. Tube is often dual certified to both. BS T72 also sets a 0.50% maximum copper limit.

We stock 347 stainless steel tube to BS T66 and BS T72, and cut tube to length in-house.

Grades / Specifications

- BS T66
- BS T72
- Type 347 / UNS S34700
- W.Nr 1.4550

Benefits

- Resists intergranular corrosion
- Good weldability
- Good corrosion resistance

* Chemical Composition (weight %)

	C	Si	Mn	P	S	Cr	Ni	Nb	Cu
min.		0.20	0.50			17.0	9.0	10×C	
max.	0.08	1.00	2.00	0.035	0.025	19.0	12.0	1.00	0.50

* As per BS T66. The copper limit applies to BS T72

Mechanical Properties (solution annealed)

Specification	Tensile Strength (MPa)	0.2% Proof Stress (MPa)	Elongation (%)	Hardness (HB)
BS T66	550–700	210–340	–	197 max
BS T72	550–700	210–340	40 min	–

Key Applications

- Aerospace hydraulic lines
- Superheater tubes
- Cooling tubes
- Furnace tubing
- Oil & gas applications

347 or 321?

Both are stabilised grades: 321 with titanium, 347 with niobium. Niobium is not lost in the welding arc, so 347 filler is often used to weld both.

For titanium-stabilised tube, see our 321 stainless steel tube.

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UKAS TESTING 1930

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