

Seamless Cold-Drawn Low-Alloy Steel Tubes for Economizer

Standard & Material

ASTM A423/A423M ASME SA423 GB/T 150.2 09CrCuSb

It covers min wall thickness, seamless low alloy steel tubes for pressure containing parts such as economizers or other applications where corrosion resistance is important. The tubing sizes and thicknesses usually furnished are 12.7mm to 127mm in outside diameter and 0.9mm to 12.7mm inclusive, in min wall thickness. Tubing having other dimensions maybe furnished, provided such tubes comply with all other requirements of this specification.

The corrosion rate of 09CrCuSb in 50% H₂SO₄ solution at 70°C for 24 hours is not more than 14 mg/ cm·h, which is better than that of similar steels and stainless steels in the world.

Grade	09CrCuSb	CRIR (Japan)	1Cr18Ni9	Corten	S-TEN (Japan)	A3 (Q235B)
Corrosion Rate	7.30	13.40	21.70	63.00	27.4	103.50
Times	1	1.84	2.97	8.63	3.75	14.11

Chemistry Composition

C, % 0.12 max

Mn, % 0.35-0.65

P, % 0.030 max

S, % 0.020 max

Si, % 0.17-0.37

Cu, % 0.25-0.45

Cr, % 0.70-1.10

Sb, % 0.04-0.10



Mechanical Properties

Tensile Strength, MPa 390-550

Yield Strength, MPa 245 min

Elongation, % 30 min

Wall Thickness: min wall thickness or average wall thickness

Developed Length: max 30 meters each length, +10mm/-0mm

Manufacture: the tubes made by cold drawn process.

Heat Treatment: the tubes are heat treated by normalizing.

Delivery Condition: Black or Nitrogen Protected.

Inspection & Test: chemistry composition analysis, tensile test, flattening test, flaring test, hardness test, NDT, surface inspection and dimension check.

Further Process: U bending tubes, fin tubes