

U-Bend Seamless Copper and Copper Alloy Heat Exchanger and Condenser Tubes

Standard & Material

ASTM B395/B395M ASME SB395 C44300 O61

It covers the requirements for condenser, evaporator, and heat exchanger U-bends that are manufactured from seamless copper and copper alloy tube. It is applicable to product 2 inch [50mm] or less, inclusive, in diameter. The coppers and copper alloys are including C10200, C10300, C10800, C12000, C12200, C14200, C19200, C23000, C44300, C44400, C44500, C60800, C68700, C70400, C70600, C70620, C71000, C71500, C71520, and C72200.

Chemistry Composition

Cu, % 70.0-73.0

Sn, % 0.90-1.20

Pb, % 0.07 max

Fe, % 0.06 max

As, % 0.02-0.06

Zn, % remainder

Mechanical Properties

Tensile Strength, MPa 310 min

Yield Strength, MPa 105 min

Expansion, % 20 min



Wall Thickness: min wall thickness or average wall thickness

Developed Length: max 25 meters each length, +10mm/-0mm

Manufacture: the tubes are made by the processes such as casting, extrusion, drawing, annealing, straightening, trimming, and other processes which may produce a seamless tube in the specified condition.

Heat Treatment: the tubes are heat treated as annealed (O61) temper. The U-bend portion of tubes furnished in copper alloy C44300 should be relief annealed (HR) after bending.

Inspection & Test: chemistry composition analysis, tension test, expansion test, flattening test, mercurous nitrate test or ammonia vapor test, NDT, surface inspection and dimension check.

Further Process: U bending tubes, fin tubes