C12200 DHP Copper

AMERITUBE

Seamless copper tube manufactured to the ASTM B 75 - Standard Specification for Seamless Copper Tube may be either round, square, or rectangular and is suitable for general engineering applications. Tubes meeting this standard may be furnished in any of several tempers (H55, H58, H80, O60, or O50) ranging from light drawn (usually limited to round tubes) to light annealed. It is the responsibility of the purchaser, when ordering, to provide the requirements for alloy (UNS#), temper, dimensions (diameter, wall thickness, or distance between parallel surfaces), form (straight lengths or coils), and total length or number of pieces of any particular size. It is this requirement that forces this tube to be a special order tube and not a standard stocked material. Ameritube mainly provides this alloy where there is no corrosion resistance necessary and high heat transfer is required.

CHEMICAL COMPOSITION

	Cu	Fe	P	As	Sn[(1)]	Zn
MIN/MAX	99.99min	-	.015-.040	-	-	-
NOMINAL	-	-	-	-	-	-

Request Quote

APPLICABLE SPECIFICATIONS

Tube	ASTM B698, B903	Tube, Condenser	ASME SB111 ASTM B111	Tube, Seamless	ASME SB75 ASTM B75, B641 MILITARY MIL-T-24107 SAE J461, J463	Tube, Seamless for Air Conditioning and Refrigeration Field Service	ASTM B280 SAE J461, J463	Tube, Welded	ASME SB543 ASTM B641, B447, B716, B543
Tube, Capillary	ASTM B360	Tube, Drainage (DWV)	ASTM B306	Tube, Seamless(Water)	ASTM B88	Tube, Seamless for Torpedo Use	MILITARY MIL-T-3235	Tube, Welded for Air Conditioning and Refrigeration Service	ASTM B640
Tube, Coils	ASTM B743	Tube, Finned	ASME SB359 ASTM B359 MILITARY MIL-T-22214	Tube, Seamless Bright Annealed	ASTM B68	Tube, U-Bend	ASME SB395 ASTM B395	Wire, Flat	ASTM B272

FABRICATION PROPERTIES

Soldering	Brazing	Oxyacetylene Welding	Gas Shielded Arc Welding	Coated Metal Arc Welding	Spot Weld	Seam Weld	Butt Weld	Capacity for being Cold Worked	Capacity for being Hot Formed	Forgeability / Machinabilty Rating
Excellent	Excellent	Good	Excellent	Not Recommended	Not Recommended	Not Recommended	Good	Excellent	Excellent	65 / 20

PHYSICAL PROPERTIES

Melting Point - Liquidus	Density	Specific Gravity	Electrical Resistivity	Electrical Conductivity	Thermal Conductivity	Coefficient of Thermal Expansion	Specific Heat Capacity	Modulas of Elasticity in Tension	Modulus of Rigidity
1981 F	0.323 lb/in^3 @ 68 F	8.94	12.2 ohms-cmil/ft @68 F	85 %IACS @ 68 F	196.0 Btu · ft/(hr ·ft2.^{O}F) @ 68F	9.5 ·10^{-6} per ^{O}F (68-392 F)	0.092 Btu/lb/^{O}F @ 68 F	17000 ksi	6400 ksi
1083 C	8.94 gm/cm^3 @ 20 C	8.94	2.03 microhm-cm @ 20 C	0.497 MegaSiemens/cm @ 20 C	339.2 W/m · ^{O}K @ 20 C	17.1 ·10^{-6} per ^{O}C (20-200C)	393.5 J/kg · ^{O}K at 293 K	117000 MPa	41330 MPa

MAXIUM PRESSURE WORK

P = Maxium work pressure(psi)
S = Minimum tensile strength of material for a specific temper(It is the value of the tensile strength in psi in Mechanica properties table)
D = Exterior diameter of tube
T = Wall thickness of tube

$$P = \frac{2T \times S}{5D}$$

NON DESTRUCTIVE TESTS

Eddy Current Testing
Hydrostatic Testing
Air Underwater Testing
Ultrasonic Testing
(PMI) Positive Material Identification

DESTRUCTIVE TESTS

Microstructure Test
Tensile Test
Flattening Test
Expansion Test
Optical Test
Ammonia Vapor Test
Spectrometry Test