HOCOL SEAMLESS COPPER TUBE



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Technical Specification

Standard	JIS H3300		
Materials Grade	C1220		
Chemical Composition	Cu (Copper) + Ag (Silver) %	≥ 99.90	
	P (Phosphorus) %	0.015 - 0.040	
Mechanical Properties	Temper	Annealed O - H	
	Tensile Strength (Mpa)	Over 205	
	Elongation (%)	Over 40 (50mm)	
	Rockwell Hardness	HR15T: Below 60	
	Grain Size (mm)	0.025 ~ 0.060	
	Nondestructive (All: size of drill hole)	Ø 4 - 10 : 0.9 mm	
		Ø 10 - 20 : 1.0 mm	
		Ø 20 - 30 : 1.1 mm	



The **HoCoL** seamless copper tubes are manufactured to various of outside diameter and thickness combination to meet the desired application in air conditioning industry. The input materials are entirely used the Cathode Copper purity 99.90% to ensure a de-oxidizing atmosphere to enable correct soldering and brazing.

Eddy Current Testing

HoCol seamless copper tubes integrity is well defined by fact that all tubes meet the standard of ASTM E243 or JIS H0502 and conduct 100% eddy current tested to ensure Free Defect or leakage detrimental to practical use.

Micro Structure

The grain size is tested as the standard of JIS H 0501 to ensuring the **HoCol** seamless copper tubes do not crack when being brazed, bent or expanded.

Other Lab Facilities

HoCol Seamless copper tubes also comprehensive in-house lab facilities to measure other important scope such as:

- -Chemical Composition
- -Mechanical Properties and Physical Properties Test (Ultimate Tensile Strength, Yield Strength Hardness and Elongation)
- -Flareability
- -Flattenability
- -Non-Destructive
- -Hydrostatic

Safe Working Pressure Calculation

The safe working pressure for **HoCol** seamless copper tubes have engineered from the temperature range from 40° C to 200° C for various tube temper (O or H).

Formulation for Safe Working Pressure Calculation:

$$P = \frac{2S \times t}{D - 0.8t}$$

P: Test Hydrostatic Pressure (Mpa)

S: Design Stress Value

t: Minimum Wall Thickness, mm

D : Outer Diameter, mm

Note:

1 bar = 14.5 psi $S = 41 \text{ N/mm}^2$

1 bar = 0.1 Mpa

1 Mpa = 145 psi

The calculation provided as references, kindly contact Superior for precise calculations.

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Standard Dimension Seamless Copper Tube

	Pancake Copper Coil								
Outside Dia	ameter		Wall Thickness (mm)					Length (m)	Packing
Inch	mm	0.51	0.56	0.61	0.71	0.81	0.91		Coil / Ctn
1/4	6.35	О	О	О	О			15	12
3/8	9.52	O	O	O	O	O		15	9
1/2	12.70	O	O	O	O	O	O	15	7
5/8	15.88		o	o	O	o	O	15	5
3/4	19.05			o	o	o	o	15	4

Copper Straight Pipe							
Outside Dia	ameter	Wall Thickness (mm)				Length (m)	Packing
Inch	mm	0.71	0.81	0.91	1.22		Length / Bundle
3/8	9.52	o	O	O		5.8	25
1/2	12.70	o	O	0		5.8	25
5/8	15.88	o	o	o		5.8	25
3/4	19.05	o	O	0		5.8	20
7/8	22.22	o	O	O		5.8	20
1 1/8	28.58	o	O	O	o	5.8	12
1 3/8	34.93	o	О	0	o	5.8	7
1 5/8	41.28		O	0	o	5.8	7



COPPER FITTINGS ASME B 16.22





COUPLING C x C

SIZE	PACKING
	(PCS / BAG)
1/4"	25
3/8"	25
1/2"	25
5/8"	25
3/4"	25
7/8"	25
1 1/8"	10
1 3/8"	10
1 5/8"	10
2 1/8"	2
2 5/8"	2
3 1/8"	2



90° ELBOW CxC

SIZE	PACKING
	(PCS / BAG)
1/4"	25
3/8"	25
1/2"	25
5/8"	25
3/4"	25
7/8"	25
1 1/8"	10
1 3/8"	10
15/8"	10
2 1/8"	2
2 5/8"	2
3 1/8"	2



45° ELBOW C x C

SIZE	PACKING
	(PCS / BAG)
1/4"	25
3/8"	25
1/2"	25
5/8"	25
3/4"	25
7/8"	25
1 1/8"	10
1 3/8"	10
1 5/8"	10
2 1/8"	2
2 5/8"	2
3 1/8"	2

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