

Copper and Copper Alloy Tube Mechanical Properties

Production Item	Tensile Strength Rm N/mm ²	Yield Strength Rm N/mm ²	Elongation %	Grain Size	Expansion Test	Flattening Test	Rockwell Hardness	Remarks
Copper Tube (BV Grade)	220 Min	100 Min	35 Min	-	20% O.D	3 Time of the Wall thickness of the tube	-	Annealed
	230 Min	155 Min	20 Min	-	15% O.D	-	-	Quarter-Hard Temper
	270 Min	For guidance	10 Min	-	-	-	-	Quarter-Hard Temper
Copper Tube (JIS Grade)	205 Min	-	40 Min	0.025 ~ 0.060	20% O.D	3 Time of the Wall thickness of the tube	-	Annealed
	205 Min	-	-	-	-	-	-	OL
	245 ~ 325	-	-	-	-	-	30 ~ 60 (HR30T)	1/2H
Copper Tube (ASTM Grade)	205 Min	62	-	0.040 Min	20% O.D	3 Time of the Wall thickness of the tube	60(Max) (HR15T)	Soft Annealed
	205 Min	62	-	0.040 Min	-	-	65(Max) (HR15T)	Light Anneal
	245 ~ 325	205	-	-	-	-	30 ~ 60 (HR30T)	Light Drawn
Copper Tube (BS Grade)	220 ~ 250 Min	-	40 Min	-	40% O.D	3 Time of the Wall thickness of the tube	60(Max) (HV)	Annealed
	-	-	-	-	-	-	-	Annealed
	250 Min	-	30 Min	-	-	-	75 ~ 100 (HV)	1/2H
Al-Brass Tube (BV Grade)	345 Min	125 Min	35 Min	-	20% O.D	3 Time of the Wall thickness of the tube	-	Annealed
Al-Brass Tube (JIS Grade)	375 Min	-	40 Min	-	1.25% O.D	3 Time of the Wall thickness of the tube	-	Annealed
Al-Brass Tube (ASTM Grade)	345 Min	125 Min	40 Min	-	20% O.D	3 Time of the Wall thickness of the tube	-	Annealed
Al-Brass Tube (BS Grade)	300 ~ 370	-	40 Min	-	30% O.D	3 Time of the Wall thickness of the tube	75(Max) (HV)	Annealed
Cu-Ni(90/10) (BV Grade)	290 Min	105 Min	30 Min	-	20% O.D	3 Time of the Wall thickness of the tube	-	Annealed
Cu-Ni(90/10) (JIS Grade)	275 Min	-	30 Min	-	1.25% O.D	3 Time of the Wall thickness of the tube	-	Annealed
Cu-Ni(90/10) (ASTM Grade)	260 Min	90 Min	-	-	30% O.D	3 Time of the Wall thickness of the tube	-	Annealed
Cu-Ni(90/10) (BS Grade)	300 ~ 380	-	30 Min	-	30% O.D	3 Time of the Wall thickness of the tube	100(Max) (HV)	Annealed