

SPECIFICATION SHEET

Copper Clad Aluminum Tube (CCA) /Aluminum Clad Copper Tube (ACC)

The copper clad aluminum tube or aluminum clad copper tube is one composite tube which aluminum pipe inside and copper clad outside or copper pipe inside and aluminium clad outside. The final products has concentrates the advantages of copper and aluminium, which can reduce copper resources, increase economic efficiency, prolong the service life of refrigeration products.

No	Alloy	Thickness	Diameter	Length
1	Copper: T2(C11000 in JIS) Aluminum:3003 3103	0.5-1.5mm	6.35-19.05 mm	As per customer request.

CHEMICAL COMPOSITION (%)

Standard: GB/T5231-2001

Grade	Cu+Ag	P	Bi	Sb	As	Fe	Ni	Pb	Sn	S	Zn	O
Cu-T2	99.5	-	0.001	0.002	0.002	0.005	-	0.005	-	0.005	-	-

Standard: GB/T 3190-2008

Grade	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Al
Al-3003	0.6	0.7	0.05-0.20	1.0-1.5	-	-	-	0.10	-	remain
Al-3013	0.5	0.7	0.10	0.7-1.4	0.3	0.1	-	0.20	0.1	remain

SPECIFICATION

Standard: GB/T 3190-2008

CCA Tubes					Copper tube					Weight Ratio
Out diameter(mm)		Wall thickness(mm)		Weight	Out diameter(mm)		Wall thickness(mm)		Weight	CCA / Cu
Standard	Tolerance	Standard	Tolerance	g/m	Standard	Tolerance	Standard	Tolerance	g/m	%
6.35	+/-0.05	0.5	+/-0.03	39.77	6.35	+/-0.05	0.5	+/-0.03	81.74	48.65
9.52		0.7	+/-0.04	83.94	9.52		0.7	+/-0.04	172.54	
12.7		0.7	+/-0.04	114.21	12.7		0.7	+/-0.04	234.75	
15.88		1.0	+/-0.06	202.31	15.88		1.0	+/-0.06	415.84	
19.05		1.2	+/-0.08	291.23	19.05		1.2	+/-0.08	598.60	

MECHANICAL PROPERTIES

Standard: GB/T 4437.1-2015

Item	Temper	Sample Temper	Thickness /mm	Tensile strength R _m /MPa	Yield strength R _{p0.2} /MPa	Elongation/%		Bending Radius* ¹
						A _{50mm}	A _{5.65}	
3003	O	O	ALL	95-130	35	25	22	-
	H112	H112	≤ 1.60	95	35	-	-	-
			> 1.60	95	35	25	22	-

*1 Coil samples bending 90°, t – thickness of coil

PHYSICAL PROPERTIES

Property	Value	Unit
Density(20°C)	4.3-5.5	g/cm ³
Melting Point	575-660	°C
Thermal Expansion	11.7-23.4	(10-6K-1)(20/100°C)
Specific heat capacity	386-890	J/(Kg.K)(0/100°C)
Modulus of Elasticity	69-108	GPa
Thermal Conductivity	225-397	W/(m. K) 20°C
Resistivity	0.0172	nΩ .m

Formability
Very Good

Weldability
Good

Machinability
Very Good

Corrosion Resistance
Very Good

APPLICATIONS

It is widely used in air conditioner and refrigerator, dehumidifier, car radiator, condenser, cooler, evaporator and other heat exchange industry.

PRODUCTS



PACKING

Shanghai Metal Products are packed and labelled according to the regulations and customer's requests. Great care is taken to avoid any damage which might be caused during storage or transportation. In addition, clear labels are tagged on the outside of the packages for easy identification of the product I. D. and quality information.

