

C50710

Cu-Sn-Ni-P ALLOY

1、Characteristic：

- Having high strength and good workability
- High heat resistance temper and easy plating
- Applicable to Automobile terminals、electrical terminals

2、Chemical Composition：

Alloy	Chemical Composition %					
	Cu	Sn	Ni	Fe	Zn	P
C50710	Rem.	1.7~2.3	0.1~0.4	≤0.10	≤0.20	≤0.15

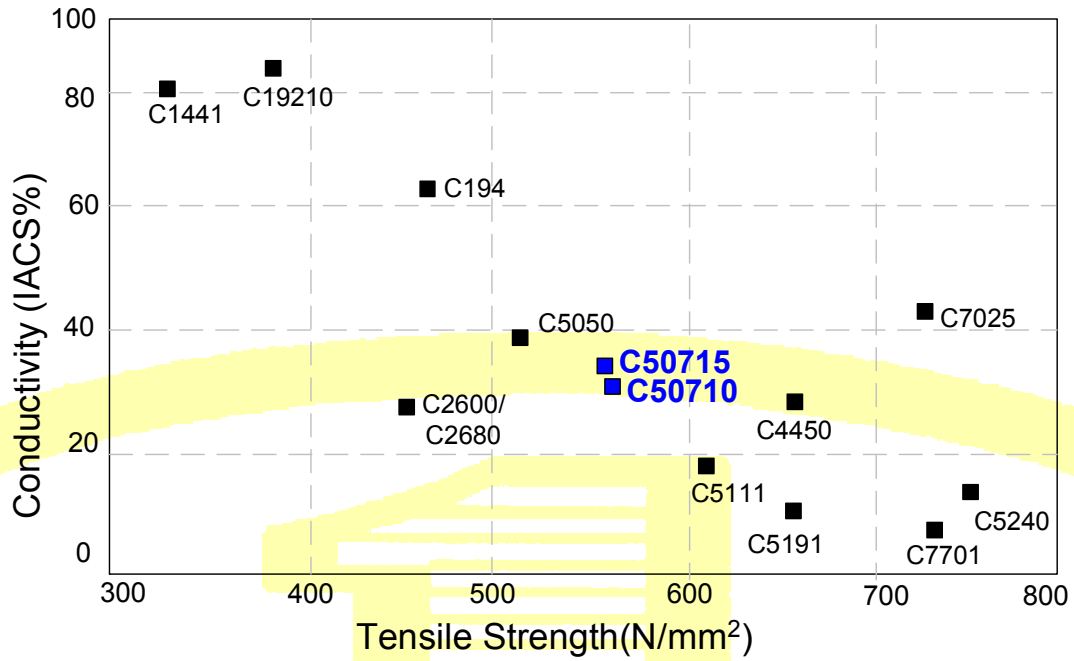
3、Physical Properties：

Characteristic	C50710
Melting point °C (Liquid)	1065
Melting point °C (Solid)	995
Density (gm/cm ³) (20°C)	8.88
Coefficient of Thermal Expansion (10 ⁻⁶ /°C 20°C~100°C)	17.0
Thermal Conductivity (cal/cm ² /cm/sec/°C 20°C)	0.37
Electrical Conductivity (Annealing) (IACS%)	32
Modulus of Elasticity (kgf/mm ²)	12700

4、Mechanical Properties：

Alloy	Temper	Mechanical Properties		
		TS (N/mm ²)	EL (%)	Hv(500g)
C50710	O	≥315	≥30	70~115
	1/2 H	410~510	≥10	125~165
	3/4H	490~590	≥5	150~185
	H	540~635	≥2	170~205
	EH	610~705	—	≥185

5、Characteristic location :



6、Bending Properties :

(1) 90° bending test : ($t \leq 0.3$)

Test method : JIS Z 2248

Alloy	Temper	Direction	R/t						R/t (min)	
			0	0.5	1.0	1.5	2.0	2.5		3.0
C50710	1/2H	Good way	○	◎	◎	◎	◎	◎	◎	0
		Bad way	○	◎	◎	◎	◎	◎	◎	0

Determination : ▲ : Crack(Failed) 、 △ : Big wrinkles(Qualified) 、 ○ : Small wrinkles(Qualified) 、 ◎ : Good (Qualified)

(2) 180° bending test : ($t \leq 0.3$)

Test method : JIS Z 2248

Alloy	Temper	Direction	R/t						R/t (min)	
			R/T	M-R/t (min.)	1.0	1.5	2.0	2.5		3.0
C50710	1/2H	Good way	▲	○	◎	◎	◎	◎	◎	0.5
		Bad way	▲	▲	△	○	◎	◎	◎	1.0

Determination : ▲ : Crack(Failed) 、 △ : Big wrinkles(Qualified) 、 ○ : Small wrinkles(Qualified) 、 ◎ : Good (Qualified)