

# **COPPER NICKEL-TIN BRONZE (C72900)**

## TYPICAL USES

Hardiall is used in aircrafts in various components thanks to its outstanding physical and mechanical properties, matching the stringent needs of the aircraft and aerospace industries. Because of these same characteristics, C729 is in high demand for the oil and gas industry, and others as well.



CONTACT US

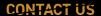




# **COPPER NICKEL-TIN BRONZE (C72900)**

## TYPICAL USES

Product Category	Product	Reason			
Electrical	Connectors	Electrical Conductivity, Thermal Conductivity, Corrosion Resistance, Resistant to Oxidation, Formability, High Modulus of Elasticity, Very High Strength, Resistance to Stress Relaxation			
	Contacts	Electrical Conductivity, Thermal Conductivity, Corrosion Resistance, Resistant to Oxidation, Formability, High Modulus of Elasticity, Very High Strength, Resistance to Stress Relaxation			
	Controls	Electrical Conductivity, Thermal Conductivity, Corrosion Resistance, High Strength			
	Miniaturized Sockets	Corrosion Resistance, Formability, High Modulus of Elasticity, Very High Strength			
	Relay Elements	Electrical Conductivity, Thermal Conductivity, Corrosion Resistance, Resistant to Oxidation, Formability, High Modulus of Elasticity, Very High Strength, Resistance to Stress Relaxation			
	Switches	Electrical Conductivity, Thermal Conductivity, Corrosion Resistance, High Strength			
Industrial	Springs	Corrosion Resistance, Resistant to Oxidation, Formability, High Modulus of Elasticity, Very High Strength, Resistance to Stress Relaxation			
	Wire	Corrosion Resistance, Resistant to Oxidation, Formability, High Modulus of Elasticity, Very High Strength			







## **COPPER NICKEL-TIN BRONZE (C72900)**

### **MECHANICAL PROPERTIES**

Form	Temper Code	Tensile Strength (ksi)	YS-0.2% Offset (ksi)	YS-0.5% Ext (ksi)	YS-0.05% Offset	Elongation (%)	
Strip	TS02	145 Min for Standard			125 Min for Standard	3 Тур	
	TS01	130 Min for Standard			105 Min for Standard	4 Тур	
	TS03	155 Min for Standard			135 Min for Standard	2 Typ	
	TS04	165 Min for Standard			145 Min for Standard	2 Typ	
	TM02	105 Min for Standard	90 Min for Standard		80 Min for Standard	15 Typ	
	TM00	95 Min for Standard	75 Min for Standard		70 Min for Standard	22 Typ	
	TM04	115 Min for Standard	105 Min for Standard		95 Min for Standard	10 Typ	
	TM08	150 Min for Standard	140 Min for Standard		125 Min for Standard	2 Typ	
	TM06	130 Min for Standard	120 Min for Standard		105 Min for Standard	6 Тур	
	TB00	64 Min for Standard			24 Min for Standard	32 Тур	
	TD02	85 Min for Standard				8 Тур	
	TD01	75 Min for Standard			50 Min for Standard	18 Typ	
	TD03	95 Min for Standard			80 Min for Standard	3 Тур	
	TD04	100 Min for Standard			85 Min for Standard		
	TX00	120 Min for Standard			95 Min for Standard	6 Тур	
* Measured at	Measured at room temperature, 68°F (20°C).						

### **CHEMICAL PROPERTIES**

Elements									
Cu(1,2)	Pb(3)	Sn	Zn	Fe	Ni(4)	Mg	Mn	Nb	
Min (%)			7.5			14.5			
Max (%)	Rem	0.02	8.5	0.5	0.5	15.5	0.15	0.3	0.1

- (1) Cu + Sum of Named Elements 99.7% min.
- (2) Cu value includes Ag.
- (3) 0.005% Pb max. for hot rolling.
- (4) Ni value includes Co.

### **FABRICATION PROPERTIES**

Machining Technique	Suitability		
Soldering	Excellent		
Brazing	Excellent		
Oxyacetylene Welding	Good		
Gas Shielded Arc Welding	Excellent		
Coated Metal Arc Welding	Excellent		
Spot Weld	Excellent		
Seam Weld	Excellent		
Butt Weld	Excellent		
Capacity for Being Cold Worked	Excellent		
Capacity for Being Hot Formed	Good		



