



ARCOTECH

AL-511 (CuSn4) ROLLED PRODUCTS

CHEMICAL COMPOSITION, %	
Cu+Sn+P	≥ 99.50
Sn	3.5-4.5
P	0.03-0.35
Zn	≤ 0.3

ALLOY DESIGNATIONS	
UNS	C51100
EN	CuSn4
JIS	C5111
BS	PB-101

COIL SHEET SPECIFICATIONS

Thickness (mm)	0.10- 2.50
Width (mm) *	6.00 - 406
Inner Diameter (mm)	100-150-200-300-400-500
Coil Weight (Kg/mm width)	1.00 – 4.00
Sheet Length (m)	0.50 – 3.00

*Note: Min. and Max. width depends on thickness of the strip

CHARACTERISTICS

AL-511 is commonly known as Phosphor bronze of grade 1.

This provides an excellent combination of strength, excellent formability and hardness.

Good corrosion resistance with excellent soldering and brazing properties

MECHANICAL PROPERTIES

Temper		Hardness , HV Min.	Tensile Strength MPa	Elongation % Min.
Ann.	O	80	295-335	40
¼ Hard	H01	100	335-440	30
1/2 Hard	H02	150	440-530	8
Hard	H04	180	530-610	4
Extra Hard	H06	190	≥610	--

PHYSICAL PROPERTIES

TYPICAL VALUES IN ANNEALED TEMPER AT 20 ° C

Density	Electrical Conductivity	Thermal conductivity	Modulus of Elasticity	Specific Heat
(g/cm ³)	(% IACS)	(W/m.K)	(Gpa)	(J/kg.K)
8.86	20	84	110	380

ARCOTECH LTD

181, Sector-3, Industrial growth Centre, Rewari, Haryana, India. Ph: 01284-264160/161, Website :www.arcotech.in



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Fabrication Properties

Capacity Being Cold Worked	Excellent
Machinability	Less Suitable
Capacity for Being Electroplated	Excellent
Capacity for Being Hot Dip Tinned	Excellent
Soft Soldering	Excellent
Resistance Welding	Good
Gas Shielded Arc Welding	Good
Laser Welding	Good

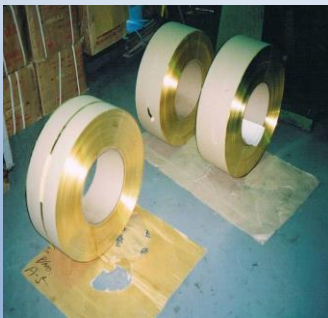
CORROSION RESISTANCE

AL-511 is Corrosion resistance to sea water and industrial atmosphere.

This grade is largely insensitive to stress corrosion cracking.

Packaging

Standard seaworthy packaging or as per specific requirements of customer.



TYPICAL APPLICATIONS

- Stamped parts
- Connectors
- Contact Springs
- Chemical hardware
- Clutch discs, Diaphragms

AL-511 conform ROHS Directive

This data is general technical product information. Binding technical features are subject to the contract.

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