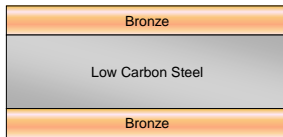


Product Overview

Bronze clad low carbon steel combines the strength and formability of steel with the wear properties of bronze. These composites are produced using a wide variety of bronze alloys that are roll bonded to either one or both surfaces and, depending on the end application, over a range of ratios. Typical applications include wheel bearings, gear boxes, and similar applications that require strength combined with good resistance to wear and bearing stresses.



Product Description

EMS Material Designation	C51900/G10060
Composition	Clad Layer: C51900; Core Layer: G10060 steel (Other compositions available)
Ratio	10 / 80 / 10 (Other ratios available)

Chemical Composition

<u>UNS</u>	<u>Grade Eur</u>	<u>Chemistry (%)</u>
C51900	CuSn6	Pb 0.05 max., Sn 5.0-7.0, Zn 0.30 max., Fe 0.10 max., P 0.03 - 0.35, Cu Bal.
G10060	C4D / 1.0300	C 0.080, Mn 0.25-0.40, P 0.040 max., S 0.050 max., Fe 99.43 - 99.75

Physical Properties

	ENGLISH		METRIC	
Density	0.291	lb / in ³	8.05	g / cm ³
Electrical Conductivity	12.8	%IACS	0.074	μS / cm
Electrical Resistivity	81.0	cir mil ohm / ft	13.5	μohms-cm

Mechanical Properties (Annealed)

	ENGLISH		METRIC	
Yield Strength 0.2%offset	38.8	Kpsi	268	MPa
Tensile Strength	49.3	Kpsi	340	MPa
Elongation 2" gage length	45	%	45	%
Hardness (Steel layer)	88	HV	49	Rockwell B

Corrosion Resistance

The external bronze cladding produces a clad composite with excellent corrosion resistance which is comparable to solid bronze.

Formability

The low carbon steel core produces a clad composite with good formability and excellent deep drawing properties. The bronze surface layer provide excellent wear properties which also aids most forming operations.



Bronze Clad Low Carbon Steel

Data Sheet - C51900/G10060

Availability

Gauge	0.0030 - 0.0600 inches (0.08 - 1.5 mm)
Width	Widths up to 20 inches (508 mm) available.
Ratio	Others available upon request
Surface	Bright (polished) or matte
Temper	Annealed and cold rolled tempers available.
Form	Coils or sheets

Contact

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