C28500

LEAD FREE BRASS

DESCRIPTION

C28500 is a lead free material which is however quite suitable for machining due to its structural constitution. C28500 can be therefore used as a cost-effective replacement for conventional lead-containing machining brass provided that it must not meet high requirements as regards mechanical properties and corrosion resistance.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	57.00	59.00
Pb	-	0.25
Fe	-	0.35
Total Others	-	0.90
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO ASTM B927 (AS PER TEMPER HO2)

Range (Inch)	From	To	UTS Min (ksi)	PS Min (ksi)	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	0.059	0.500	69.00	43.00	8.00	-	-
	0.500	1.000	65.00	36.00	12.00	-	-
	1.000	2.953	59.00	26.00	16.00	-	-
Hex (A/F)	0.118	0.500	69.00	43.00	8.00	-	-
	0.500	1.000	65.00	36.00	12.00	-	-
	1.000	2.756	59.00	26.00	16.00	-	-
Square (A/F)	0.118	0.500	69.00	43.00	8.00	-	-
	0.500	1.000	65.00	36.00	12.00	-	-
	1.000	2.362	59.00	26.00	16.00	-	-
Rectangle (Thickness)	0.118	0.500	69.00	43.00	8.00	-	-
	0.500	1.000	65.00	36.00	12.00	-	-
	1.000	1.969	59.00	26.00	16.00	-	-

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C28500

LEAD FREE BRASS

MECHANICAL PROPERTIES ACCORDING TO ASTM B927 (AS PER TEMPER H02)

Range (Inch)	From	To	UTS Min (Mpa)	PS Min (Mpa)	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	1.5	12.00	480.00	300.00	8.00	-	-
	12.00	25.00	450.00	250.00	12.00	-	-
	25.00	75.00	410.00	180.00	18.00	-	-
Hex (A/F)	3.00	12.00	480.00	300.00	18.00	-	-
	12.00	25.00	450.00	250.00	12.00	-	-
	25.00	70.00	410.00	180.00	18.00	-	-
Square (A/F)	3.00	12.00	480.00	300.00	8.00	-	-
	12.00	25.00	450.00	250.00	12.00	-	-
	25.00	50.00	410.00	180.00	18.00	-	-
Rectangle (Thickness)	3.00	12.00	480.00	300.00	8.00	-	-
	12.00	25.00	450.00	250.00	12.00	-	-
	25.00	50.00	410.00	180.00	18.00	-	-

PHYSICAL PROPERTIES

Melting Point - Liquidus°F	1650
Melting Point - Solidus°F	1630
Densitylb/cu in. at 68°F	0.303
Specific Gravity	8.39
Electrical Conductivity% IACS at 68°F	29
Thermal ConductivityBtu/ sq ft/ ft hr/ °F at 68°F	58
Coefficient of Thermal Expansion 68-21210^{-} per °F (68 – 212°F)	11
Coefficient of Thermal Expansion 68-57210^{-6} per °F (68 – 572°F)	121
Specific Heat Capacity Btu/ lb /°F at 68°F	0.09
Modulus of Elasticity in Tensionksi	12300

FABRICATION PROPERTIES

Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Capacity for being hot worked	Good
Gas Shielded Arc Welding	Fair
Coated Metal Arc Welding	Not Recommended
Spot Weld	Good
Seam Weld	Not Recommended
Butt Weld	Good
Capacity for Being Cold Worked	Fair
Capacity for Being Hot Formed	Excellent
Forgeability Rating	100
Machinability Rating	60

TYPICAL USES

- Fasteners
- Industrial

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