ALLOY DATA

C24000
ASTM B36

AJ OSTER

Low Brass, named for its relatively low zinc content, is a choice of many design engineers for applications where strength and formability are required. Due to the higher content of zinc found in this alloy, compared to Red Brass it develops a beautiful antique brass color when chemically treated making it ideal from many decorative or architectural applications. Other advantages of C240 include: high solderability, high fatigue limit, and excellent grain size control.

Chemical Composition

Copper[1]	**78.5-81.5%**
Zinc	**Remainder**
Lead	0.05% Max
Iron	0.05% Max

[1] Copper plus named elements, 99.8% min

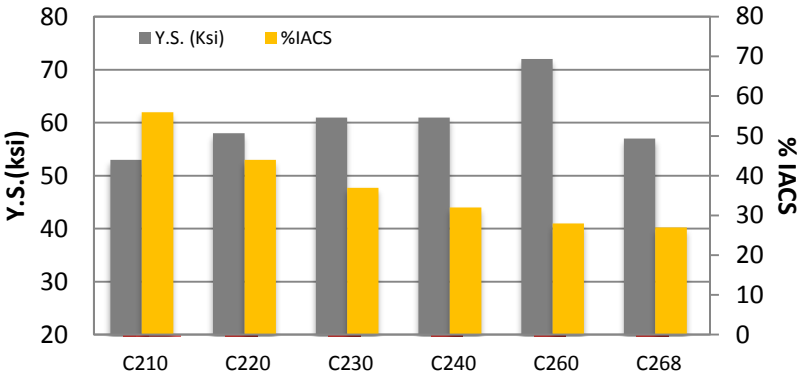

Figure 1: Comparison of Yield Strength and Electrical Conductivity performance of select Hard temper brass materials.

Physical Properties

	English Units	Metric Units
Density	0.313 lb/in^3 @ 68ºF	8.66 g/cm^3
Thermal Conductivity	81 BTU-ft/ft^2-hr-ºF	139 W/mK
Electrical Resistivity	32.4 ohm circ mils/ft	5.39 microhm-cm
Electrical Conductivity (annealed)	32 % IACS*	0.186 megamho/cm
Modulus of Elasticity	16,000,000 psi	110 kN/mm^2
Coeff. Of Thermal Expansion		
68-572ºF (20-300ºC)	10.6 PPM/ºF	19.1 PPM/ºC

*International Annealed Copper Standard

Mechanical Properties

Temper[1]	Tensile Strength		Yield Strength		% Elongation[2]	Typical 90º Bend Formability GW/BW[3]	
	ksi	N/mm^2	ksi	N/mm^2			
Annealed (Soft)[4]	44-54	305-370	20	140	50	-	-
1/4 Hard	48-58	330-400	29	200	26	-	-
1/2 Hard	55-65	380-450	42	290	18	0.3	0.5
3/4 Hard	61-71	420-490	53	365	10	0.5	1.0
Hard	68-77	470-530	61	420	4	1.0	1.5
Extra Hard	78-87	540-600	68	470	2	1.5	2.8
Spring	85-93	585-640	76	525	1 min	3.0	4.5
Extra Spring	89-97	615-670	78	540	1 max		

[1] Mechanical properties subject to change. All rolled- tempers are accepted or rejected based on Tensile Strength.

[2] Nominal Values in 2" (51mm) [3] DATA FOR REFERENCE ONLY. R/T = Bend Radius/Material Thickness <0.016" (0.4mm) thick, 11/16 (17.5mm) wide.

[4] Annealed temper are manufactured to a grain size only, consult mill for additional info.

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