ALLOY DATA

C75200
ASTM B122

AJ OSTER

Alloy C752 is an excellent choice for designers considering both functional and decoration applications. Offering a combination of strength, ductility and moderately high work-hardening rate C752 is widely used as both a deep drawing and spring alloy. The added advantage of having a silvery-white color almost identical to that of silver or stainless steel makes C752 valuable for a variety of applications including; flatware, jewelry, medallions and antimicrobial touch surfaces.

Chemical Composition

Copper[1]	**63.0-66.5%**
Nickel[2]	**16.5-19.5%**
Zinc	**Remainder**
Iron	0.25% Max
Lead	0.05% Max
Manganese	0.50% Max

[1] Cu includes Ag; Copper plus named elements = 99.5%

[2] Ni Values Include Co

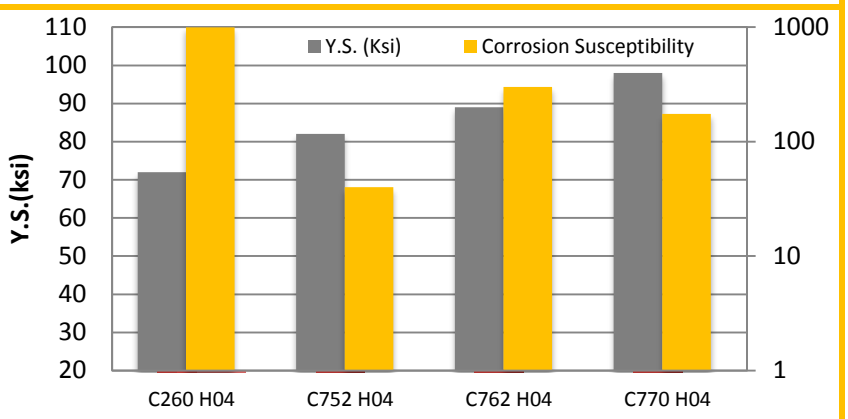

Figure 1: Comparison of Yield Strength and relative susceptibility to stress corrosion (Mattsson's solution and moist ammonia, 1000 = most susceptible).

Physical Properties

	English Units	Metric Units
Density	0.316 lb/in^3 @ 68ºF	8.73 g/cm^3
Thermal Conductivity	19 BTU-ft/ft^2-hr-ºF	33 W/mºK
Electrical Resistivity	173 ohm circ mils/ft	28.7 microhm-cm
Electrical Conductivity (annealed)	6% IACS*	0.0348 megamho/cm
Modulus of Elasticity	18,000,000 psi	124 kN/mm^2
Thermal Capacity(Specific Heat)	0.090 Btu/lb/Fº @ 68ºF	377.1 J/kg · ºC @ 20ºC
Coeff. Of Thermal Expansion		
68-572ºF (20-300ºC)	9.0 PPM/ºF	16.2 PPM/ºC

*International Annealed Copper Standard

Mechanical Properties

Temper[1]	Tensile Strength		Yield Strength[2]		% Elongation[2]	Typical 90º Bend Formability GW/BW[3]	
	ksi	N/mm^2	ksi	N/mm^2			
Annealed	53-63	365-435	25	170	35	-	-
1/4 Hard	58-72	400-495	45	310	24	-	0.5
1/2 Hard	66-80	455-550	63	435	14	0.5	0.8
3/4 Hard	74-86	510-595	75	515	8	1.0	1.0
Hard	78-91	540-625	82	565	5	1.5	1.5
Extra Hard	86-98	595-675	91	625	3	2.0	2.0
Spring	90-101	620-695	93	640	1 min	4.0	4.0
Extra Spring	96 min	660 min	95 min	655 min	2 Max		

[1] Mechanical properties subject to change. All tempers listed are made to a Tensile Strength specification unless otherwise noted.

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

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