

Born of necessity during war years, C762 was developed to conserve nickel for national defense. Principally used for electrical relay springs and contact spring this alloy offers a unique combination of stiffness and strength required for such applications. Its work-hardening rate is high compared to other copper alloys which is especially valuable when the functional strength of a part must be raised during forming. C762 also offer an attractive nickel silver color that can be used in decorative applications. For more information contact Olin Brass Market Development Engineering at 618-258-5255, OlinBrass.com or email us at info@olinbrass.com.

Chemical Composition

Copper¹	57.0-61.0%
Nickel²	11.0-13.5%
Zinc	Remainder
Iron	0.25% Max
Lead	0.09% Max
Manganese	0.50% Max

¹ Cu includes Ag, Copper plus named elements = 99.5%

² Ni Values Include Co

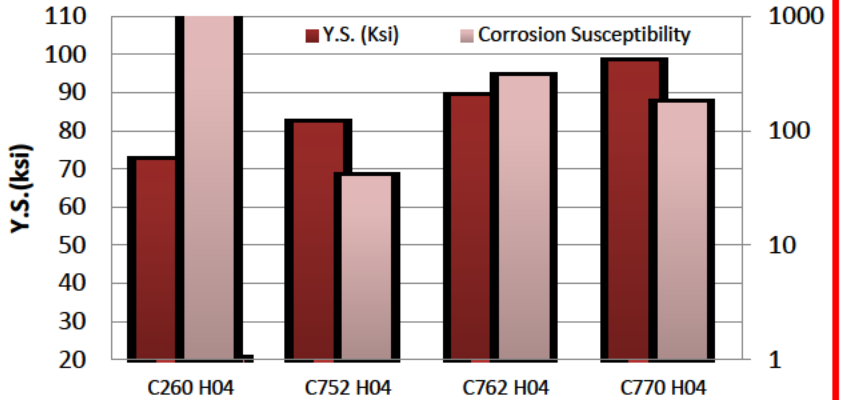


Figure 1: Comparison of Yield Strength and relative susceptibility to stress corrosion (Mattsson's solution and moist ammonia, 1000 = most susceptible).

Physical Properties

	English Units	Metric Units
Density	0.310 lb/in ³ @ 68°F	8.58 g/cm ³
Thermal Conductivity	24 BTU-ft/ft ² -hr-°F	41.5 W/m ² K
Electrical Resistivity	115 ohm circ mils/ft	19 microhm-cm
Electrical Conductivity (annealed)	9% IACS*	0.05 megamho/cm
Modulus of Elasticity	18,000,000 psi	124 kN/mm ²
Thermal Capacity(Specific Heat)	0.090 Btu/lb/F° @ 68°F	377.1 J/kg · °C @ 20°C
Coeff. Of Thermal Expansion 68-572°F (20-300°C)	9.0 PPM/°F	16.2 PPM/°C

*International Annealed Copper Standard

Mechanical Properties

Temper ¹	Tensile Strength		Yield Strength ²		% Elongation ²	Typical 90° Bend Formability GW/BW ³	
	ksi	N/mm ²	ksi	N/mm ²			
Annealed	57-75	395-515	36	250	40	-	-
1/4 Hard	65-81	450-560	52	360	35	1.0	1.0
1/2 Hard	75-91	515-625	70	485	18	1.3	1.3
3/4 Hard	83-98	570-675	82	565	10	1.5	1.5
Hard	90-105	620-725	89	615	4	2.0	2.0
Extra Hard	101-114	695-785	98	675	2	2.5	2.5
Spring	109-122	750-840	105	725	1 Max	3.0	3.0
Extra Spring	114 min	785 min	102 min	705 min	1 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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