

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. 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 | 63.0-66.5% |
| Nickel² | 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

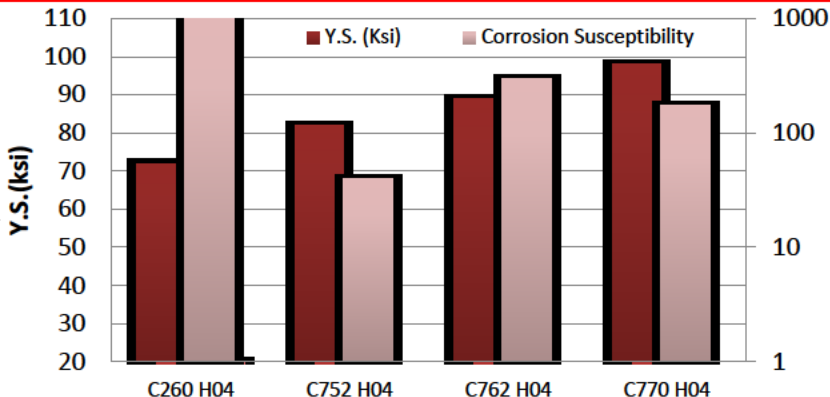


Figure 1: Comparison of Yield Strength and relative susceptibility to stress corrosion (Mattsson's solution and moist ammonia, 1000 = most susceptible).

Physical Properties

| | English Units | Metric Units |
|--|----------------------------------|------------------------|
| Density | 0.316 lb/in ³ @ 68°F | 8.73 g/cm ³ |
| Thermal Conductivity | 19 BTU-ft/ft ² -hr-°F | 33 W/m°K |
| 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/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 | 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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