



HSM Wire International, Inc

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www.hsmwire.com



Alloy C260 Cartridge Brass Alloy

| | |
|----------------------|---|
| Description: | The alloy has good strength but poor stress relaxation characteristics and does not make a good spring material. It has good conductivity but the solderability is impaired by the high Zinc content. |
| Applications: | Alloy C260 is commonly used for electrical components, electronic parts, and mechanical fasteners. |

Chemical Composition

| | | | | | |
|-----------------------------|------------|------------|------------|------------|--|
| Nominal Composition: | Cu% | Zn% | Pb% | Fe% | |
| | 70 | 30 | - | - | |
| Composition Limits: | Cu% | Zn% | Pb% | Fe% | |
| | 68.5 -71.5 | Balance | 0.7 max | 0.05 max | |

Mechanical Properties for Round and Square Wire / Flat

| Temper | Tensile Strength PSI | Yeild Strength PSI | Nominal Elongation % | Tensile Strength PSI (Flat) | Yeild Strength PSI (Flat) | Nominal Elongation % (Flat) |
|------------|-------------------------|-----------------------|-------------------------|--------------------------------|------------------------------|--------------------------------|
| Annealed | 48-54,000 | 16 -23,000 | 56-64 | 44 - 53,000 | 11 - 22,000 | 54 - 66 |
| 1/8 Hard | 50-65,000 | 46,000 | 35 | - | - | - |
| 1/4 Hard | 62-77,000 | 57,000 | 20 | 49 - 59,000 | 40,000 | 43 |
| 1/2 Hard | 79-94,000 | 65,000 | 8 | 57 - 67,000 | 52,000 | 25 |
| 3/4 Hard | 92 - 107,000 | 70,000 | 6 | 64 - 74,000 | 57,000 | 10 |
| Hard | 102 - 117,000 | 70,000 | 5 | 71 - 81,000 | 63,000 | 8 |
| Extra Hard | 115 - 129,000 | 70,000 | 4 | 83 - 92,000 | 65,000 | 5 |
| Spring | 120,000 Min | 70,000 | 3 | 91 - 100,000 | 65,000 | 3 |

* Flat wire sections having a 3:1 width to thickness ratio or less are by commerical convention processed to the same tensile strength values as round or square wire.

*To be used as a guideline only.

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Physical Properties

| | English Units | Metric Units |
|--|-------------------------------|---------------------------------|
| Melting Point, Liquidus | 1750°F | 955°C |
| Melting Point, Solidus | 1680°F | 915°C |
| Density | 0.308 lb/cu in @ 68°F | 8.53 gm/cu cm |
| Thermal Conductivity, Annealed | 70 BTU ft/sq ft-hr-°F @ 68°F | 0.29 cal cm/sq cm-sec-°C @ 20°C |
| Coefficient of Thermal Expansion | 0.0000111 per °F (68 - 572°F) | 0.0000199 per °C (20 - 300°C) |
| Electrical Resistivity, Annealed | 37 ohms (circ mil/ft) @ 68°F | 6.2 microhm/cm @ 20°C |
| Electrical Conductivity, Annealed | 28% I.A.C.S | 0.162 megmho/cm @ 20 °C |
| Modulus of Elasticity | 16,000,000 psi | 11,200 kg/sq mm |



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