

## Eagle Brass 510 Phosphor Bronzes 5% A, 3/4 Hard

Category : Metal , Nonferrous Metal , Copper Alloy , Bronze

### Material Notes:

Alloy C510 is an alloy with good strength, formability and stress relaxation characteristics, and solderability. Applications include electronic parts, springs, switches, contacts and fasteners. Information provided by Eagle Brass Company

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Eagle-Brass-510-Phosphor-Bronzes-5-A-34-Hard.php](http://www.lookpolymers.com/polymer_Eagle-Brass-510-Phosphor-Bronzes-5-A-34-Hard.php)

Physical Properties	Metric	English	Comments
Density	8.86 g/cc	0.320 lb/in <sup>3</sup>	Annealed

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 30T	66 - 73	66 - 73	Thickness > 0.020 Inch
Tensile Strength, Ultimate	469 - 545 MPa	68000 - 79000 psi	
Tensile Strength, Yield	421 - 517 MPa	61000 - 75000 psi	0.2% offset
Elongation at Break	10 - 20 %	10 - 20 %	in 2 in.
Tensile Modulus	110 GPa	16000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	17.8 $\mu\text{m}/\text{m}\cdot\text{C}$	9.90 $\mu\text{in}/\text{in}\cdot\text{F}$	
	@Temperature 20.0 - 300 °C	@Temperature 68.0 - 572 °F	
Thermal Conductivity	69.2 W/m-K	480 BTU-in/hr-ft <sup>2</sup> -°F	

Component Elements Properties	Metric	English	Comments
Copper, Cu	94.9 %	94.9 %	
Phosphorous, P	0.10 %	0.10 %	
Tin, Sn	5.0 %	5.0 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.00001187 ohm-cm	0.00001187 ohm-cm	Annealed

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