

## Eagle Brass 519 Phosphor Bronzes 6%, Extra Hard

Category : Metal , Nonferrous Metal , Copper Alloy , Bronze

**Material Notes:**

Alloy C519 has 6% nominal tin producing higher mechanical strengths with a slight decrease in electrical conductivity when compared to C510 phosphor bronze. Often functionally interchangeable with C510 which predominates in North America, alloy C519 is generally used in Europe. Information provided by Eagle Brass Company

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Eagle-Brass-519-Phosphor-Bronzes-6-Extra-Hard.php](http://www.lookpolymers.com/polymer_Eagle-Brass-519-Phosphor-Bronzes-6-Extra-Hard.php)

Physical Properties	Metric	English	Comments
Density	8.80 g/cc	0.318 lb/in <sup>3</sup>	Annealed

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	627 - 731 MPa	91000 - 106000 psi	
Tensile Strength, Yield	607 - 710 MPa	88000 - 103000 psi	0.2% offset
Elongation at Break	2.0 - 5.0 %	2.0 - 5.0 %	in 2 in.
Tensile Modulus	117 GPa	17000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	18.2 $\mu\text{m}/\text{m}\cdot\text{°C}$	10.1 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 20.0 - 300 °C	@Temperature 68.0 - 572 °F	
Thermal Conductivity	60.5 W/m-K	420 BTU-in/hr-ft <sup>2</sup> -°F	

Component Elements Properties	Metric	English	Comments
Copper, Cu	93.9 %	93.9 %	
Phosphorous, P	0.10 %	0.10 %	
Tin, Sn	6.0 %	6.0 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000119 ohm-cm	0.0000119 ohm-cm	Annealed

## Contact Songhan Plastic Technology Co.,Ltd.

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