

## Eagle Brass 316 Austenitic Stainless Steel, 1/2 Hardened

Category : Metal , Ferrous Metal , Stainless Steel , T 300 Series Stainless Steel

**Material Notes:**

The Mo addition increases general corrosion resistance to pitting from chloride ion solutions, and provides increased strength at elevated temperatures. Properties are similar to those of Type 304 except that this alloy is somewhat stronger at elevated temperatures. Corrosion resistance is improved, particularly against sulfuric, hydrochloric, acetic, formic, and tartaric acids; acid sulfates and alkaline chlorides. Information provided by Eagle Brass Company

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Eagle-Brass-316-Austenitic-Stainless-Steel-12-Hardened.php](http://www.lookpolymers.com/polymer_Eagle-Brass-316-Austenitic-Stainless-Steel-12-Hardened.php)

Physical Properties	Metric	English	Comments
Density	7.92 g/cc	0.286 lb/in <sup>3</sup>	As Annealed

Mechanical Properties	Metric	English	Comments
Tensile Strength	>= 1030 MPa	>= 150000 psi	
Tensile Strength, Yield	>= 758 MPa	>= 110000 psi	0.2% Offset
Elongation at Break	>= 6.0 %	>= 6.0 %	in 2 inches
Tensile Modulus	193 GPa	28000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	18.5 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	10.3 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	
	@Temperature 20.0 - 649 $^{\circ}\text{C}$	@Temperature 68.0 - 1200 $^{\circ}\text{F}$	
Thermal Conductivity	15.9 W/m-K	110 BTU-in/hr-ft <sup>2</sup> - $^{\circ}\text{F}$	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.080 %	<= 0.080 %	
Chromium, Cr	16 - 18 %	16 - 18 %	
Iron, Fe	62.095 - 72 %	62.095 - 72 %	Calculated as Balance
Manganese, Mn	<= 2.0 %	<= 2.0 %	
Molybdenum, Mo	2.0 - 3.0 %	2.0 - 3.0 %	
Nickel, Ni	10 - 14 %	10 - 14 %	
Phosphorous, P	<= 0.045 %	<= 0.045 %	

Component Elements Properties	Metric	English	Comments
Sulfur, S	<= 0.030 %	<= 0.030 %	

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