

## Eagle Brass 301 Austenitic Stainless Steel, 1/2 Hardened

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

### Material Notes:

Type 301 is a chromium-nickel stainless steel that provides high strength and good ductility with chromium and nickel contents lowered to increase the work hardening range. This permits higher tensile strengths to be achieved by rolling with a lower loss of ductility. When this grade is cold worked it becomes more magnetic than other austenitic stainless steels. Typical uses include aircraft structural parts, diaphragms, utensils, automotive trim, and conveyor belts. Information provided by Eagle Brass Company

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Eagle-Brass-301-Austenitic-Stainless-Steel-12-Hardened.php](http://www.lookpolymers.com/polymer_Eagle-Brass-301-Austenitic-Stainless-Steel-12-Hardened.php)

Physical Properties	Metric	English	Comments
Density	7.89 g/cc	0.285 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	>= 15 %	>= 15 %	in 2 inches
Tensile Modulus	193 GPa	28000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	18.7 µm/m-°C	10.4 µin/in-°F	
	@Temperature 20.0 - 649 °C	@Temperature 68.0 - 1200 °F	
Thermal Conductivity	16.3 W/m-K	113 BTU-in/hr-ft <sup>2</sup> -°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.15 %	<= 0.15 %	
Chromium, Cr	16 - 18 %	16 - 18 %	
Iron, Fe	74.775 - 78 %	74.775 - 78 %	Calculated as Balance
Manganese, Mn	<= 2.0 %	<= 2.0 %	
Nickel, Ni	6.0 - 8.0 %	6.0 - 8.0 %	
Phosphorous, P	<= 0.045 %	<= 0.045 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	

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

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