

## Carpenter BioDur™ 316LS Stainless Medical Implant Alloy, Annealed

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

### Material Notes:

Data provided by Carpenter Technology Corporation. Medical Implant Alloy. Vacuum arc remelted (VAR), low carbon version of Type 316 stainless. The secondary premium melting step (VAR) imparts improved cleanliness. The chemistry modifications are designed to maximize the corrosion resistance of this alloy and provide a ferrite free microstructure. The alloy is nonmagnetic even after severe cold forming operations. BioDur™ is a trademark of Carpenter Technology Corporation.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Carpenter-BioDur-316LS-Stainless-Medical-Implant-Alloy-Annealed.php](http://www.lookpolymers.com/polymer_Carpenter-BioDur-316LS-Stainless-Medical-Implant-Alloy-Annealed.php)

Physical Properties	Metric	English	Comments
Density	7.95 g/cc	0.287 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	88	88	
Tensile Strength, Ultimate	586 MPa	85000 psi	
Tensile Strength, Yield	434 MPa @Strain 0.200 %	62900 psi @Strain 0.200 %	
Elongation at Break	57 %	57 %	
Reduction of Area	88 %	88 %	

Thermal Properties	Metric	English	Comments
CTE, linear	18.5 µm/m-°C @Temperature 0.000 - 649 °C	10.3 µin/in-°F @Temperature 32.0 - 1200 °F	
Specific Heat Capacity	0.500 J/g-°C	0.120 BTU/lb-°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.030 %	<= 0.030 %	
Chromium, Cr	17 - 19 %	17 - 19 %	
Copper, Cu	<= 0.50 %	<= 0.50 %	
Iron, Fe	62 %	62 %	as remainder
Manganese, Mn	<= 2.0 %	<= 2.0 %	

Molybdenum, Mo Component Elements Properties	2.25 - 3.5 % Metric	2.25 - 3.5 % English	Comments
Nickel, Ni	13 - 15 %	13 - 15 %	
Nitrogen, N	<= 0.10 %	<= 0.10 %	
Phosphorous, P	<= 0.025 %	<= 0.025 %	
Silicon, Si	<= 0.75 %	<= 0.75 %	
Sulfur, S	<= 0.010 %	<= 0.010 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000740 ohm-cm	0.0000740 ohm-cm	

## Contact Songhan Plastic Technology Co.,Ltd.

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