ATI Allegheny Ludlum Martensitic Stainless Steel Type 420HC

Category : Metal , Ferrous Metal , Stainless Steel , T 400 Series Stainless Steel

Material Notes:

Allegheny Ludlum Type 420HC is a hardenable straight-chromium stainless steel which combines superior wear resistance of high carbon alloys with the excellent corrosion resistance of chromium stainless steels. Oil quenching this alloy from temperatures between 1800°F and 1950°F produces the high strength and/or wear resistance as well as corrosion resistance.A major use for this grade of heat treatable stainless steels is in cutlery. When blanking cutlery parts from annealed raw material stock, Type 420HC will usually exhibit hardness, yield strength, and tensile strength that are low enough for fine blanking purposes. Type 420HC is a high carbon version of Type 420. When sufficient amounts of carbon are added to straight-chromium stainless steel, the alloy then has the capability to transform its microstructure through proper heat treatment (hardening) into one that will possess optimum strength , hardness, edge retention, and wear resistance.Information provided by Allegheny Ludlum Corporation.

Order this product through the following link:
http://www.lookpolymers.com/polymer_ATI-Allegheny-Ludlum-Martensitic-Stainless-Steel-Type-420HC.php

Physical Properties	Metric	English	Comments
Density	7.73 g/cc	0.279 lb/in³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	88	88	
Hardness, Rockwell C	56 - 59	56 - 59	
Tensile Strength, Ultimate	600 MPa	87000 psi	Typical
Tensile Strength, Yield	310 MPa @Strain 0.200 %	45000 psi @Strain 0.200 %	
Elongation at Break	28 %	28 %	
Modulus of Elasticity	200 GPa	29000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	11.2 µm/m-°C @Temperature 20.0 - 200 °C	6.22 µin/in-°F @Temperature 68.0 - 392 °F	
	12.5 µm/m-°C @Temperature 20.0 - 600 °C	6.94 µin/in-°F @Temperature 68.0 - 1110 °F	
Thermal Conductivity	24.207 W/m-K @Temperature 100 °C	168.00 BTU-in/hr-ft²-°F @Temperature 212 °F	

Thermal Properties	Metric	English	Comments
Melting Point	1454 - 1510 °C	2649 - 2750 °F	
Solidus	1454 °C	2649 °F	
Liquidus	1510 °C	2750 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.44 %	0.44 %	
Chromium, Cr	13 %	13 %	
Iron, Fe	86 %	86 %	as balance
Manganese, Mn	<= 1.0 %	<= 1.0 %	
Nickel, Ni	<= 0.50 %	<= 0.50 %	
Phosphorous, P	<= 0.040 %	<= 0.040 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	
Sulfur, S	<= 0.030 %	<= 0.030 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000560 ohm-cm	0.0000560 ohm-cm	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China