

ATI Allegheny Ludlum Altemp® X-750 Nickel-Based superalloy

Category : Metal , Nonferrous Metal , Nickel Alloy , Superalloy

Material Notes:

Characteristics: precipitation hardenable, high strength up to 1300°F, oxidation resistant up to 1800°F. Applications: aerospace, heat treatment fixtures, forming tools, extrusion dies. Information provided by Allegheny Ludlum

Order this product through the following link:

http://www.lookpolymers.com/polymer_ATI-Allegheny-Ludlum-Altemp-X-750-Nickel-Based-superalloy.php

Physical Properties	Metric	English	Comments
Density	8.249 g/cc	0.2980 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	>= 30	>= 30	AMS 5542 annealed and AMS 5598 ages, strip and plate
	>= 32	>= 32	AMS 5542 annealed and AMS 5598 ages, sheet
Tensile Strength, Ultimate	<= 896 MPa	<= 130000 psi	AMS 5542 annealed, strip and sheet
	>= 1069 MPa	>= 155000 psi	AMS 5542 aged, strip and plate
	>= 1103 MPa	>= 160000 psi	AMS 5598 aged, strip and plate
	>= 1138 MPa	>= 165100 psi	AMS 5542 aged, sheet
	>= 1172 MPa	>= 170000 psi	AMS 5598 aged, sheet
Tensile Strength, Yield	<= 448 MPa	<= 65000 psi	AMS 5542 annealed, sheet
	@Strain 0.200 %	@Strain 0.200 %	
	<= 517 MPa	<= 75000 psi	AMS 5598 annealed, sheet
	@Strain 0.200 %	@Strain 0.200 %	
	>= 689 MPa	>= 99900 psi	AMS 5542 aged, plate
	@Strain 0.200 %	@Strain 0.200 %	
>= 724 MPa	>= 105000 psi	AMS 5542 aged, sheet	
@Strain 0.200 %	@Strain 0.200 %		
>= 724 MPa	>= 105000 psi	AMS 5598 aged, plate	
@Strain 0.200 %	@Strain 0.200 %		
>= 793 MPa	>= 115000 psi	AMS 5598 aged, sheet	
@Strain 0.200 %	@Strain 0.200 %		

Elongation at Break Mechanical Properties	$\geq 12\%$ Metric	$\geq 12\%$ English	AMS 5598 aged, strip Comments
	$\geq 15\%$	$\geq 15\%$	AMS 5542 aged, strip
	$\geq 18\%$	$\geq 18\%$	AMS 5598 aged, sheet and plate
	$\leq 18\%$	$\leq 18\%$	AMS 5598 annealed, strip
	$\leq 20\%$	$\leq 20\%$	AMS 5542 annealed, strip
	$\geq 20\%$	$\geq 20\%$	AMS 5542 aged, sheet and plate
	$\leq 35\%$	$\leq 35\%$	AMS 5598 annealed, sheet
	$\leq 40\%$	$\leq 40\%$	AMS 5542 annealed, sheet
Modulus of Elasticity	214 GPa	31000 ksi	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	0.40 - 1.0 %	0.40 - 1.0 %	
Carbon, C	$\leq 0.080\%$	$\leq 0.080\%$	
Chromium, Cr	14 - 17 %	14 - 17 %	
Cobalt, Co	$\leq 1.0\%$	$\leq 1.0\%$	
Copper, Cu	$\leq 0.50\%$	$\leq 0.50\%$	
Iron, Fe	5.0 - 9.0 %	5.0 - 9.0 %	As Remainder
Manganese, Mn	$\leq 1.0\%$	$\leq 1.0\%$	
Nickel, Ni	$\geq 70\%$	$\geq 70\%$	Includes Co
Niobium, Nb (Columbium, Cb)	0.70 - 1.2 %	0.70 - 1.2 %	
Silicon, Si	$\leq 0.50\%$	$\leq 0.50\%$	
Sulfur, S	$\leq 0.010\%$	$\leq 0.010\%$	
Titanium, Ti	2.25 - 2.75 %	2.25 - 2.75 %	

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