

ATI Allegheny Ludlum AL 444™ Ferritic Stainless Steel

Category : Metal , Ferrous Metal , Ferritic , Stainless Steel , T S40000 Series Stainless Steel

Material Notes:

Low carbon, low nitrogen ferritic stainless steel alloy. Characteristics:practically immune to chloride stress corrosion cracking, enhanced resistance to pitting and crevicing, good general corrosion resistance, good creep resistance. Applications: heat exchangers tubing, food processing equipment, automotive exhausts, and hot water tanks. Information provided by Allegheny Ludlum

Order this product through the following link:

http://www.lookpolymers.com/polymer_ATI-Allegheny-Ludlum-AL-444-Ferritic-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	7.75 g/cc	0.280 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	80	80	
Tensile Strength, Ultimate	517 MPa	75000 psi	
Tensile Strength, Yield	345 MPa @Strain 0.200 %	50000 psi @Strain 0.200 %	
Elongation at Break	30 %	30 %	in 2"

Thermal Properties	Metric	English	Comments
CTE, linear	11.0 μm/m-°C @Temperature 20.0 - 200 °C	6.11 μin/in-°F @Temperature 68.0 - 392 °F	
Specific Heat Capacity	0.427 J/g-°C	0.102 BTU/lb-°F	
Thermal Conductivity	26.8 W/m-K @Temperature 100 °C	186 BTU-in/hr-ft ² -°F @Temperature 212 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.013 %	0.013 %	
Chromium, Cr	18.2 %	18.2 %	
Iron, Fe	>= 79.79 %	>= 79.79 %	As Remainder
Manganese, Mn	0.30 %	0.30 %	
Molybdenum, Mo	1.9 %	1.9 %	

Nickel, Ni Component Elements Properties	<= 0.50 % Metric	<= 0.50 % English	Comments
Niobium, Nb (Columbium, Cb)	0.27 %	0.27 %	
Nitrogen, N	0.015 %	0.015 %	
Other	0.40 %	0.40 %	
Phosphorous, P	<= 0.030 %	<= 0.030 %	
Silicon, Si	0.45 %	0.45 %	
Sulfur, S	<= 0.0020 %	<= 0.0020 %	
Titanium, Ti	0.13 %	0.13 %	

Descriptive Properties	Value	Comments
Corrosion Rate mils per year	>1000	10% Sulfamic Acid, Boiling
	>1000	10% Sulfuric Acid, Boiling
	0.1	20% Acetic Acid, Boiling
	1.7	1% Hydrochloric Acid, Boiling
	101	10% Oxalic Acid, Boiling
	18	65% Nitric Acid, Boiling
	2.3	20% Phosphoric Acid, Boiling
	27.1	45% Formic Acid, Boiling
	293	50% Sodium Hydroxide, Boiling
Pitting Potential, Volts vs. Sat. Calomel Electrode	0.58	
Stress Corrosion Cracking Resistance (ASTM G30)	Pass	42% MgCl ₂
	Pass	33% LiCl
	Pass	26% NaCl

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