

ATI Allegheny Ludlum Stainless Steel Free Machining Grade Type 303, Annealed (UNS S30300)

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

Material Notes:

Allegheny Ludlum's 303 is a free-machining stainless steel specifically designed to exhibit improved machinability. These modifications retain, in so far as possible, the good mechanical properties and corrosion resistance of the basic or patent compositions which they represent. Sulfur is added to produce the free-machine characteristics. Type 303 is a non-magnetic austenitic stainless steel which is not hardenable by heat treatment. It is the free-machining modification of the basic 18% chromium - 8% nickel stainless steel. Information provided by Allegheny Ludlum Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_ATI-Allegheny-Ludlum-Stainless-Steel-Free-Machining-Grade-Type-303-Annealed-UNS-S30300.php

Physical Properties	Metric	English	Comments
Density	8.03 g/cc	0.290 lb/in ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	517 - 621 MPa	75000 - 90100 psi	
Tensile Strength, Yield	207 - 276 MPa	30000 - 40000 psi	
Elongation at Break	35 - 50 %	35 - 50 %	in 2" (50 mm)
Reduction of Area	50 - 60 %	50 - 60 %	
Modulus of Elasticity	200 GPa	29000 ksi	in tension
Fatigue Strength	285 MPa	41300 psi	test conditions not reported
Izod Impact	81.0 J	59.7 ft-lb	

Thermal Properties	Metric	English	Comments
CTE, linear	16.6 µm/m-°C	9.22 µin/in-°F	
	@Temperature 20.0 - 100 °C	@Temperature 68.0 - 212 °F	
	18.2 µm/m-°C	10.1 µin/in-°F	
	@Temperature 20.0 - 500 °C	@Temperature 68.0 - 932 °F	
	19.6 µm/m-°C	10.9 µin/in-°F	
	@Temperature 20.0 - 787 °C	@Temperature 68.0 - 1450 °F	

Thermal Conductivity Thermal Properties	16.4 W/m-K Metric	114 BTU-in/hr-ft ² -°F English	Comments
Melting Point	1400 °C	2550 °F	
Maximum Service Temperature, Air	927 °C	1700 °F	oxidation resistance is good

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.15 %	<= 0.15 %	
Chromium, Cr	17 - 19 %	17 - 19 %	
Iron, Fe	70 %	70 %	as balance
Manganese, Mn	<= 2.0 %	<= 2.0 %	
Molybdenum, Mo	<= 0.60 %	<= 0.60 %	
Nickel, Ni	8.0 - 10 %	8.0 - 10 %	
Phosphorous, P	<= 0.20 %	<= 0.20 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	
Sulfur, S	>= 0.15 %	>= 0.15 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000720 ohm-cm	0.0000720 ohm-cm	
Magnetic Permeability	<= 1.02	<= 1.02	

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