

Carlson 303 Austenitic Stainless Steel

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel

Material Notes:

Carlson 303 is an austenitic free-machining stainless steel. The standard 18-8 stainless steels are more difficult to turn, mill and drill which restricts their use when considerable machining is required. The additional sulfur present in 303 assists in breaking up turnings which reduces drag on the cutting tool. This permits greater machining speed and tends to produce smoother machined finishes which in turn lowers production costs. This material is not as resistant to general corrosion as is 304. It tends to form a rust film more readily in moist atmospheres and is very susceptible to pitting or localized corrosion in solutions of chlorides, iodides, or bromides. Under relatively dry conditions or in mildly corrosive environments, 303 resists rust. It also has good resistance to oxidation up to 1700°F. 303 is not recommended for vessels containing gases or liquids under high pressure. It is available as hot rolled, annealed and pickled (HRAP) or hot rolled, annealed only (HRA) plate. Applications Carlson 303 is utilized wherever a combination of good corrosion resistance and considerable machining is required for a part. Applications include aircraft fittings, computer motor holder rings, bushings, fittings, pump and valve parts, screw machine products, shafts and other parts requiring extensive machining. Information provided by Carlson

Order this product through the following link:

http://www.lookpolymers.com/polymer_Carlson-303-Austenitic-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	7.83 g/cc	0.283 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	160	160	
Tensile Strength at Break	241 MPa	35000 psi	
Tensile Strength, Yield	621 MPa @Strain 0.200 %	90000 psi @Strain 0.200 %	
Elongation at Break	50 %	50 %	
Reduction of Area	55 %	55 %	

Thermal Properties	Metric	English	Comments
CTE, linear	18.7 μm/m-°C @Temperature 20.0 °C	10.4 μin/in-°F @Temperature 68.0 °F	Mean
Specific Heat Capacity	0.502 J/g-°C	0.120 BTU/lb-°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.15 %	<= 0.15 %	
Chromium, Cr	17 - 19 %	17 - 19 %	

Component Elements Properties	Metric	English	Comments
Iron, Fe	57.05 - 74.85 %	57.05 - 74.85 %	
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	

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