

Carpenter Chrome Core® 18-FM Solenoid Quality Stainless Steel, Stress Relieved

Category : Metal , Electronic/Magnetic Alloy , Ferrous Metal , Stainless Steel

Material Notes:

Data provided by Carpenter Technology Corporation. This is a soft ferritic material designed for operation in more corrosive environments than tolerated by 18% Cr-Fe Type 430 stainless. This new material has corrosion resistance superior to that of Type 430FR Solenoid Quality stainless with generally similar magnetic properties. It is stabilized by niobium (columbium) to provide improved corrosion resistance with optimum machinability. The alloy balance also provides resistivity similar to that of Type 430FR Solenoid Quality stainless. High resistivity is beneficial in applications involving AC excitation due to the suppression of eddy current losses. Chrome Core® is a registered trademark of Carpenter Technology Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Carpenter-Chrome-Core-18-FM-Solenoid-Quality-Stainless-Steel-Stress-Relieved.php

Physical Properties	Metric	English	Comments
Density	7.70 g/cc	0.278 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	86	86	
Tensile Strength, Ultimate	517 MPa	75000 psi	
Tensile Strength, Yield	345 MPa @Strain 0.200 %	50000 psi @Strain 0.200 %	
Elongation at Break	35 %	35 %	In 4D
Reduction of Area	64 %	64 %	

Thermal Properties	Metric	English	Comments
CTE, linear	10.4 µm/m-°C @Temperature 23.0 - 204 °C	5.78 µin/in-°F @Temperature 73.4 - 399 °F	
	11.5 µm/m-°C @Temperature 23.0 - 427 °C	6.39 µin/in-°F @Temperature 73.4 - 801 °F	
	13.1 µm/m-°C @Temperature 23.0 - 982 °C	7.28 µin/in-°F @Temperature 73.4 - 1800 °F	
Specific Heat Capacity	0.460 J/g-°C	0.110 BTU/lb-°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.015 %	0.015 %	
Chromium, Cr	17.5 %	17.5 %	
Iron, Fe	79 %	79 %	as remainder
Manganese, Mn	0.40 %	0.40 %	
Molybdenum, Mo	1.75 %	1.75 %	
Nickel, Ni	0.20 %	0.20 %	
Niobium, Nb (Columbium, Cb)	0.25 %	0.25 %	
Phosphorous, P	0.020 %	0.020 %	
Silicon, Si	0.90 %	0.90 %	
Sulfur, S	0.30 %	0.30 %	

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