

Crucible Steel 430F Stainless Steel

Category : Metal , Ferrous Metal , Ferritic , Stainless Steel , T 400 Series Stainless Steel

Material Notes:

Crucible 430F is a low carbon, high chromium ferritic stainless steel, specially developed for solenoid core applications in corrosive environments. The chemistry is closely controlled to develop optimum machining and magnetic properties. Information provided by Crucible Specialty Metals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Crucible-Steel-430F-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Specific Gravity	7.65 g/cc	7.65 g/cc	
Density	7.64 g/cc	0.276 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	88	88	
Tensile Strength, Ultimate	552 MPa	80000 psi	
	48.3 MPa	7000 psi	
	@Temperature 760 °C	@Temperature 1400 °F	
	531 MPa	77000 psi	annealed bar
	@Temperature 21.1 °C	@Temperature 70.0 °F	
Tensile Strength, Yield	345 MPa	50000 psi	
	@Strain 0.200 %	@Strain 0.200 %	
Elongation at Break	30 %	30 %	in 2"
	32 %	32 %	in 2"
	@Temperature 21.1 °C	@Temperature 70.0 °F	
	70 %	70 %	in 2"
	@Temperature 760 °C	@Temperature 1400 °F	
Reduction of Area	60 %	60 %	
	74 %	74 %	
	99 %	99 %	
	@Temperature 760 °C	@Temperature 1400 °F	
Fatigue Strength	207 MPa	30000 psi	

Thermal Properties	Metric	English	Comments
CTE, linear	10.3 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	5.70 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	@Temperature 20.0 - 100 $^\circ\text{C}$	@Temperature 68.0 - 212 $^\circ\text{F}$	
	11.9 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	6.60 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	@Temperature 20.0 - 788 $^\circ\text{C}$	@Temperature 68.0 - 1450 $^\circ\text{F}$	
Thermal Conductivity	23.69 W/m-K	164.4 BTU-in/hr-ft ² - $^\circ\text{F}$	
Melting Point	1490 $^\circ\text{C}$	2714 $^\circ\text{F}$	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.060 %	0.060 %	
Chromium, Cr	17.5 %	17.5 %	
Iron, Fe	81.215 %	81.215 %	As Remainder
Manganese, Mn	0.40 %	0.40 %	
Phosphorous, P	0.025 %	0.025 %	
Silicon, Si	0.50 %	0.50 %	
Sulfur, S	0.30 %	0.30 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000236 ohm-cm	0.0000236 ohm-cm	
	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	
	0.0000453 ohm-cm	0.0000453 ohm-cm	
	@Temperature 800.0 $^\circ\text{C}$	@Temperature 1472 $^\circ\text{F}$	

Descriptive Properties	Value	Comments
Endurance Limit, ksi	40	

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