

Crucible Steel CSM® 21 17Cr-4Ni Precipitation Hardening Stainless Steel

Category : Metal , Ferrous Metal , Stainless Steel , Precipitation Hardening Stainless

Material Notes:

CSM 21 is a precipitation hardening stainless mold steel, providing outstanding corrosion resistance and toughness, good polishability, and moderate wear resistance, combined with simple heat treatment. CSM 21 is supplied in the solution treated condition at about 32 HRC, but is intended to be aged prior to use. Information provided by Crucible Industries

Order this product through the following link:

http://www.lookpolymers.com/polymer_Crucible-Steel-CSM-21-17Cr-4Ni-Precipitation-Hardening-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	7.81 g/cc	0.282 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	32	32	Solution Treated
	@Treatment Temp. 1040 °C	@Treatment Temp. 1900 °F	
	33	33	hardened H1150
	@Treatment Temp. 621 °C	@Treatment Temp. 1150 °F	
	34	34	hardened H1100
	@Treatment Temp. 593 °C	@Treatment Temp. 1100 °F	
	39	39	hardened H1025
	@Treatment Temp. 551.7 °C	@Treatment Temp. 1025 °F	
40	40	hardened H975	
@Treatment Temp. 524 °C	@Treatment Temp. 975 °F		
Modulus of Elasticity	197 GPa	28500 ksi	
	13.6 J	10.0 ft-lb	
Charpy Impact	@Treatment Temp. 496 °C	@Treatment Temp. 925 °F	hardened H925; V-notch
	42.0 J	31.0 ft-lb	
	@Treatment Temp. 524 °C	@Treatment Temp. 975 °F	hardened H975; V-notch

Mechanical Properties	°C Metric	°F English	Comments
	46.1 J @Treatment Temp. 551.7 °C	34.0 ft-lb @Treatment Temp. 1025 °F	hardened H1025; V-notch
	67.8 J @Treatment Temp. 1040 °C	50.0 ft-lb @Treatment Temp. 1900 °F	Solution Treated; V-notch
	74.6 J @Treatment Temp. 593 °C	55.0 ft-lb @Treatment Temp. 1100 °F	hardened H1100; V-notch
	89.5 J @Treatment Temp. 621 °C	66.0 ft-lb @Treatment Temp. 1150 °F	hardened H1150; V-notch

Thermal Properties	Metric	English	Comments
CTE, linear	12.1 µm/m-°C @Temperature 21.1 - 93.3 °C	6.70 µin/in-°F @Temperature 70.0 - 200 °F	
	12.4 µm/m-°C @Temperature 21.1 - 204 °C	6.90 µin/in-°F @Temperature 70.0 - 400 °F	
	12.8 µm/m-°C @Temperature 21.1 - 316 °C	7.10 µin/in-°F @Temperature 70.0 - 600 °F	
	13.1 µm/m-°C @Temperature 21.1 - 427 °C	7.30 µin/in-°F @Temperature 70.0 - 800 °F	
Thermal Conductivity	1.44 W/m-K @Temperature 93.3 °C	10.0 BTU-in/hr-ft²-°F @Temperature 200 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.020 %	0.020 %	
Chromium, Cr	15.25 %	15.25 %	
Copper, Cu	3.5 %	3.5 %	
Iron, Fe	75.4 %	75.4 %	as balance
Manganese, Mn	0.60 %	0.60 %	

Component Elements Properties	Metric	English	Comments
Silicon, Si	0.50 %	0.50 %	

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