

Latrobe LSS,ç 420 HC High Carbon Stainless Steel

Category : Metal , Ferrous Metal , Martensitic , Stainless Steel

Material Notes:

TLS 420 HC is a high-carbon martensitic stainless steel which exhibits an attainable hardness of approximately 55 HRC and good wear resistance. TLS 420 HC should be considered for applications such as specialty knives, industrial knives, cutlery, rolls, plastic extrusion tooling, scissors, surgical knives, bearings, and other applications which require a combination of corrosion resistance and wear resistance. Information Provided by Timken Latrobe Steel. Timken sold Latrobe in December 2006. They are now Latrobe Specialty Steels Co.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Latrobe-LSS-420-HC-High-Carbon-Stainless-Steel.php

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

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	54	54	Air Cooled from 982 ^o C, 30 minutes
	56	56	Air Cooled from 1010 ^o C, 30 minutes
	57	57	Air Cooled from 1025 ^o C, 30 minutes
Modulus of Elasticity	207 GPa	30000 ksi	
Machinability	50 - 55 %	50 - 55 %	1% Carbon Steel
Izod Impact Unnotched	13.6 J	10.0 ft-lb	Air Cooled from 1010 ^o C; 393 ^o C Temper Temperature
	20.3 J	15.0 ft-lb	Air Cooled from 1010 ^o C; 593 ^o C Temper Temperature

Thermal Properties	Metric	English	Comments
CTE, linear	10.5 Åµm/m-Å°C	5.83 Åµin/in-Å°F	
	@Temperature 20.0 - 100 Å°C	@Temperature 68.0 - 212 Å°F	
	12.0 Åµm/m-Å°C	6.67 Åµin/in-Å°F	
	@Temperature 20.0 - 500 Å°C	@Temperature 68.0 - 932 Å°F	
Thermal Conductivity	30.0 W/m-K	208 BTU-in/hr-ft ² -Å°F	
	@Temperature 20.0 Å°C	@Temperature 68.0 Å°F	
	31.11 W/m-K	215.9 BTU-in/hr-ft ² -	

Thermal Properties	Metric	English	Comments
	@Temperature 199 °C	@Temperature 390 °F	
	32.44 W/m-K	225.1 BTU-in/hr-ft ² -°F	
	@Temperature 399 °C	@Temperature 750 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.46 %	0.46 %	
Chromium, Cr	13 %	13 %	
Iron, Fe	85.44 %	85.44 %	
Manganese, Mn	0.40 %	0.40 %	
Silicon, Si	0.40 %	0.40 %	
Vanadium, V	0.30 %	0.30 %	

Electrical Properties	Metric	English	Comments
Volume Resistivity	0.0000548 ohm-cm	0.0000548 ohm-cm	

Chemical Properties	Metric	English	Comments
Critical Temperature	799 °C	1470 °F	Ac1
	860 °C	1580 °F	Ac3

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