

## Latrobe LSS™ 440C Stainless Steel Knife (ASTM A276)

Category : Metal , Ferrous Metal , Martensitic , Stainless Steel

### Material Notes:

TLS 440C Stainless Knife Steel is a high-carbon martensitic stainless steel which exhibits an attainable hardness of approximately 60 HRC. The high carbon content results in a hard matrix and numerous chromium carbides in the microstructure, which in turn provide excellent wear resistance and retention of cutting edges. TLS 440C stainless knife steel should be considered for applications such as specialty knives, industrial knives, scissors, surgical knives, and other applications which require a combination of corrosion resistance, wear resistance, or edge retention. 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-440C-Stainless-Steel-Knife-ASTM-A276.php](http://www.lookpolymers.com/polymer_Latrobe-LSS-440C-Stainless-Steel-Knife-ASTM-A276.php)

Physical Properties	Metric	English	Comments
Specific Gravity	7.62 g/cc	7.62 g/cc	
Density	7.61 g/cc	0.275 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	57.5	57.5	Oil Quenched from 1066°C, 30 minutes
	57.5	57.5	Air Quenched from 1066°C, 30 minutes
	59	59	Air Quenched from 1010°C, 30 minutes
	60	60	Oil Quenched from 1010°C, 30 minutes
	61	61	Air Quenched from 1038°C, 30 minutes
	62	62	Oil Quenched from 1038°C, 30 minutes
Modulus of Elasticity	200 GPa	29000 ksi	
Machinability	30 - 40 %	30 - 40 %	1% Carbon Steel

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 µm/m-°C	5.56 µin/in-°F	
	@Temperature 20.0 - 200 °C	@Temperature 68.0 - 392 °F	
	11.2 µm/m-°C	6.22 µin/in-°F	
	@Temperature 20.0 -	@Temperature 68.0 -	

Thermal Properties	600 °C Metric	1110 °F English	Comments
Specific Heat Capacity	0.460 J/g-°C	0.110 BTU/lb-°F	
Thermal Conductivity	24.2 W/m-K @Temperature 100 °C	168 BTU-in/hr-ft <sup>2</sup> -°F @Temperature 212 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	1.05 %	1.05 %	
Chromium, Cr	17 %	17 %	
Iron, Fe	81.15 %	81.15 %	
Manganese, Mn	0.40 %	0.40 %	
Molybdenum, Mo	0.40 %	0.40 %	
Silicon, Si	0.40 %	0.40 %	

Electrical Properties	Metric	English	Comments
Volume Resistivity	0.000060 ohm-cm	0.000060 ohm-cm	

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