

Latrobe Viscount 44® Prehardened Tool Steel (ASTM H13S)

Category : Metal , Ferrous Metal , Alloy Steel , Tool Steel

Material Notes:

Viscount 44 is a free-machining, prehardened, H13-type hot work tool steel. It is produced using special melting, forging, and heat treating processes which provide the optimum in control and reproducibility of the performance characteristics of the steel. The sulfur makes the steel readily machinable at the supplied hardness range of 42 to 46 Rockwell C, and the composition provides the strength and wear resistance expected of an H13-type steel. At the supplied hardness, the steel exhibits a yield strength of approximately 156 to 175 ksi (1076 to 1207 MPa), and an ultimate tensile strength of approximately 195 to 219 ksi (1345 to 1510 MPa). 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-Viscount-44-Prehardened-Tool-Steel-ASTM-H13S.php

Physical Properties	Metric	English	Comments
Specific Gravity	7.75 g/cc	7.75 g/cc	
Density	7.75 g/cc	0.280 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	35	35	649Â°C Temper Temperature
	44	44	593Â°C Temper Temperature
Modulus of Elasticity	207 GPa	30000 ksi	
	159 GPa	23000 ksi	
	@Temperature 538 Â°C	@Temperature 1000 Â°F	
	186 GPa	27000 ksi	
	@Temperature 204 Â°C	@Temperature 400 Â°F	
Machinability	35 - 40 %	35 - 40 %	1% Carbon Steel
Charpy Impact	8.13 J	6.00 ft-lb	V-Notch; 593Â°C Temper Temperature
	13.6 J	10.0 ft-lb	V-Notch; 649Â°C Temper Temperature

Thermal Properties	Metric	English	Comments
CTE, linear	11.3 Âµm/m-Â°C	6.28 Âµin/in-Â°F	
	@Temperature 21.0 - 204 Â°C	@Temperature 69.8 - 399 Â°F	
	13.1 Âµm/m-Â°C	7.28 Âµin/in-Â°F	

Thermal Properties	Metric	English	Comments
	@ Temperature 21.0 - 427 Â°C	@ Temperature 69.8 - 801 Â°F	
Thermal Conductivity	17.6 W/m-K	122 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 27.0 Â°C	@Temperature 80.6 Â°F	
	23.4 W/m-K	162 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 204 Â°C	@Temperature 399 Â°F	
	25.1 W/m-K	174 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 427 Â°C	@Temperature 801 Â°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.40 %	0.40 %	
Chromium, Cr	5.25 %	5.25 %	
Iron, Fe	90.9 %	90.9 %	
Molybdenum, Mo	1.35 %	1.35 %	
Silicon, Si	1.0 %	1.0 %	
Sulfur, S	0.10 %	0.10 %	
Vanadium, V	1.0 %	1.0 %	

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