

## Latrobe LSS H10 Hot Work Tool Steel (ASTM H10)

Category : Metal , Ferrous Metal , Alloy Steel , Chrome-moly Steel , Tool Steel , Hot Work Steel

### Material Notes:

TLS H10 hot work tool steel is a chromium-molybdenum hot work steel that exhibits excellent resistance to softening at elevated temperature. This grade is very resistant to thermal fatigue cracking (heat checking), and can be water cooled in service. TLS H10 is recommended for difficult hot work tooling applications such as hot punches, die casting dies, forging dies, hot shear blades, hot gripper dies, and extrusion tooling. 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-H10-Hot-Work-Tool-Steel-ASTM-H10.php](http://www.lookpolymers.com/polymer_Latrobe-LSS-H10-Hot-Work-Tool-Steel-ASTM-H10.php)

Physical Properties	Metric	English	Comments
Specific Gravity	7.78 g/cc	7.78 g/cc	
Density	7.78 g/cc	0.281 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	41	41	Air Cooled from 1024 <sup>°</sup> C and Double Tempered; 649 <sup>°</sup> C Temper Temperature
	58	58	Air Cooled from 1024 <sup>°</sup> C and Double Tempered; 149 <sup>°</sup> C Temper Temperature
Modulus of Elasticity	207 GPa	30000 ksi	
Machinability	90 - 95 %	90 - 95 %	1% Carbon Steel

Thermal Properties	Metric	English	Comments
CTE, linear	11.3 $\mu\text{m/m-}^{\circ}\text{C}$	6.28 $\mu\text{in/in-}^{\circ}\text{F}$	
	@Temperature 21.0 - 204 $^{\circ}\text{C}$	@Temperature 69.8 - 399 $^{\circ}\text{F}$	
	13.5 $\mu\text{m/m-}^{\circ}\text{C}$	7.50 $\mu\text{in/in-}^{\circ}\text{F}$	
	@Temperature 21.0 - 538 $^{\circ}\text{C}$	@Temperature 69.8 - 1000 $^{\circ}\text{F}$	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.42 %	0.42 %	
Chromium, Cr	3.15 %	3.15 %	
Iron, Fe	92.38 %	92.38 %	

Component Elements Properties	Metric	English	Comments
Molybdenum, Mo	2.15 %	2.15 %	
Silicon, Si	1.0 %	1.0 %	
Vanadium, V	0.35 %	0.35 %	

Chemical Properties	Metric	English	Comments
Critical Temperature	830 Â°C	1530 Â°F	Ac1

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