

Latrobe HS-29XLâ,,¢ ASTM M2-HC High Speed Steel

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

Material Notes:

HS-29XL (M2-HC) is the M2 composition with the carbon content increased and with the addition of alloy sulfides. The higher carbon content provides higher hardness and superior red hardness compared to standard-carbon M2. The alloy sulfides improve machinability and grindability and make it possible to produce accurately-machined tools without grinding after hardening. Because of the increased carbon content and higher attainable hardness, HS-29XL exhibits abrasion resistance that is similar to M3-1 high speed steel.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-HS-29XL-ASTM-M2-HC-High-Speed-Steel.php

Physical Properties	Metric	English	Comments
Specific Gravity	8.14 g/cc	8.14 g/cc	
Density	8.14 g/cc	0.294 lb/in³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	65.2	65.2	Oil Quenched from 1218°C
	65.6	65.6	Oil Quenched from 1177°C
	65.8	65.8	Oil Quenched from 1149°C
Modulus of Elasticity	207 GPa	30000 ksi	
Machinability	50 - 60 %	50 - 60 %	1% Carbon Steel
Izod Impact Unnotched	29.8 J	22.0 ft-lb	Oil Quenched at 1177°C; 520°C Temper Temperature
	30.5 J	22.5 ft-lb	Oil Quenched at 1204°C; 580°C Temper Temperature
	30.5 J	22.5 ft-lb	Oil Quenched at 1204°C; 650°C Temper Temperature
	32.5 J	24.0 ft-lb	Oil Quenched at 1204°C; 482°C Temper Temperature
	37.3 J	27.5 ft-lb	Oil Quenched at 1177°C; 650°C Temper Temperature
	43.4 J	32.0 ft-lb	Oil Quenched at 1177°C; 482°C Temper Temperature

Thermal Properties	Metric	English	Comments
	10.95 Âμm/m-°C	6.083 Âμin/in-°F	
CTE, linear			



Thermal Properties	@Temperature 21.0 - Metric 204 A C	@Temperature 69.8 - English 599 A P	Comments
	12.54 µm/m-°C	6.967 µin/in-°F	
	@Temperature 21.0 - 358 °C	@Temperature 69.8 - 676 °F	

Component Elements Properties	Metric	English	Comments	
Carbon, C	0.98 %	0.98 %		
Chromium, Cr	4.15 %	4.15 %		
Iron, Fe	81.29 %	81.29 %		
Manganese, Mn	0.28 %	0.28 %		
Molybdenum, Mo	5.0 %	5.0 %		
Silicon, Si	0.30 %	0.30 %		
Tungsten, W	6.15 %	6.15 %		
Vanadium, V	1.85 %	1.85 %		

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

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