

## Latrobe Magnadie - RF Modified Premium H-13 Hot Work Die Steel

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

### Material Notes:

Magnadie-RF is a premium quality 5% chromium hot work die steel. The chemistry of Magnadie-RF steel is a modification of the premium quality H-13 chemistry. Magnadie-RF steel is designed for increased production rates and increased tool life. Though the chemistry is unique, Magnadie-RF steel meets the selective standards of the North American Die Casting Association, as well as other industrial specifications including Chrysler's specification for die casting applications. 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-Magnadie-RF-Modified-Premium-H-13-Hot-Work-Die-Steel.php](http://www.lookpolymers.com/polymer_Latrobe-Magnadie-RF-Modified-Premium-H-13-Hot-Work-Die-Steel.php)

Physical Properties	Metric	English	Comments
Density	7.75 g/cc	0.280 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	39.8 - 48.7	39.8 - 48.7	
Tensile Strength, Ultimate	1376 - 1757 MPa	199600 - 254800 psi	
Tensile Strength, Yield	1301 - 1477 MPa	188700 - 214200 psi	
Elongation at Break	13 - 15.5 %	13 - 15.5 %	
Reduction of Area	42.6 - 45.2 %	42.6 - 45.2 %	
Modulus of Elasticity	207 GPa	30000 ksi	RT
	103 GPa	15000 ksi	
	@Temperature 600 °C	@Temperature 1110 °F	
Machinability	80 %	80 %	1% Carbon Steel

Thermal Properties	Metric	English	Comments
CTE, linear	11.88 µm/m-°C	6.600 µin/in-°F	
	@Temperature 27.0 - 204 °C	@Temperature 80.6 - 399 °F	
	13.38 µm/m-°C	7.433 µin/in-°F	
	@Temperature 27.0 - 649 °C	@Temperature 80.6 - 1200 °F	
Specific Heat Capacity	0.4615 J/g-°C	0.1103 BTU/lb-°F	
	25.55 W/m-K	177.3 BTU-in/hr-ft <sup>2</sup> -°F	

Thermal Properties	Metric @ Temperature 20.0 °C	English @ Temperature 68.0 °F	Comments
	27.1 W/m-K	188 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 649 °C	@Temperature 1200 °F	
	28.11 W/m-K	195.1 BTU-in/hr-ft <sup>2</sup> -°F	
	@Temperature 204 °C	@Temperature 399 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.37 %	0.37 %	
Chromium, Cr	5.3 %	5.3 %	
Iron, Fe	91.199 %	91.199 %	
Manganese, Mn	0.40 %	0.40 %	
Molybdenum, Mo	1.35 %	1.35 %	
Silicon, Si	1.0 %	1.0 %	
Sulfur, S	0.0010 %	0.0010 %	
Vanadium, V	0.38 %	0.38 %	

## Contact Songhan Plastic Technology Co.,Ltd.

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