

Latrobe Lescalloy® BG42 VIM-VAR High Performance Bearing Steel

Category : Metal , Ferrous Metal , Martensitic , Stainless Steel

Material Notes:

LESCALLOY BG42 VIM-VAR steel is a martensitic, stainless high speed steel that combines the tempering, hot hardness and hardness retention characteristics of M50 high speed steel with the corrosion and oxidation resistance of type 440C stainless. LESCALLOY BG42 VIM-VAR is double vacuum melted (vacuum induction followed by VAC-ARCA® remelting) to consistently assure good cleanliness and superior properties. Although often used for aerospace bearings and other critical applications, its excellent wear resistance and corrosion resistance makes it a superior choice for use in cutlery 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-Lescalloy-BG42-VIM-VAR-High-Performance-Bearing-Steel.php

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

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	56.5	56.5	
	@Temperature 482 Â°C	@Temperature 900 Â°F	
	60	60	
	@Temperature 316 Â°C	@Temperature 600 Â°F	
	63	63	
	@Temperature 93.3 Â°C	@Temperature 200 Â°F	
Modulus of Elasticity	220.6 GPa	31990 ksi	
	180.6 GPa	26190 ksi	
	@Temperature 482 Â°C	@Temperature 900 Â°F	
Modulus of Rigidity	70.40 GPa	10210 ksi	At 900Â°F
	86.53 GPa	12550 ksi	At 78Â°F
Poissons Ratio	0.27	0.27	
Machinability	55 - 60 %	55 - 60 %	1 % Carbon Steel

Thermal Properties	Metric	English	Comments
CTE, linear	9.81 Âµm/m-Â°C	5.45 Âµin/in-Â°F	
	@Temperature -73.0 - 21.0 Â°C	@Temperature -99.4 - 69.8 Â°F	

Thermal Properties	Metric	English	Comments
	11.03 $\mu\text{m/m-}^{\circ}\text{C}$	6.128 $\mu\text{in/in-}^{\circ}\text{F}$	
	@Temperature 21.0 - 149 $^{\circ}\text{C}$	@Temperature 69.8 - 300 $^{\circ}\text{F}$	
	12.33 $\mu\text{m/m-}^{\circ}\text{C}$	6.850 $\mu\text{in/in-}^{\circ}\text{F}$	
	@Temperature 21.0 - 538 $^{\circ}\text{C}$	@Temperature 69.8 - 1000 $^{\circ}\text{F}$	

Component Elements Properties	Metric	English	Comments
Carbon, C	1.15 %	1.15 %	
Chromium, Cr	14.5 %	14.5 %	
Iron, Fe	78.35 %	78.35 %	
Manganese, Mn	0.50 %	0.50 %	
Molybdenum, Mo	4.0 %	4.0 %	
Silicon, Si	0.30 %	0.30 %	
Vanadium, V	1.2 %	1.2 %	

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