

Latrobe Lescalloy® 13-8 Mo VIM-VAR Precipitation Hardening Stainless Steel

Category : Metal , Ferrous Metal , Martensitic , Stainless Steel , Precipitation Hardening Stainless

Material Notes:

Lescalloy 13-8 Mo VIM-VAR is a precipitation hardening martensitic stainless steel offering excellent fracture toughness and transverse mechanical properties coupled with the resistance to stress-corrosion cracking and high strength characteristics common to the family of precipitation hardening steels. A wide range of mechanical properties can be realized by selecting various single cycle low temperature aging treatments. The alloy is double vacuum melted to consistently assure low gas content, improved homogeneity and superior cleanliness. 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-13-8-Mo-VIM-VAR-Precipitation-Hardening-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	7.72 g/cc	0.279 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	>= 283	>= 283	H1150 Condition - 620Â°C
	>= 372	>= 372	H1050 Condition - 565Â°C
	>= 430	>= 430	H950 Condition - 500Â°C
Tensile Strength, Ultimate	>= 931 MPa	>= 135000 psi	H1150 Condition - 620Â°C
	>= 1210 MPa	>= 175000 psi	H1050 Condition - 565Â°C
	>= 1520 MPa	>= 220000 psi	H950 Condition - 500Â°C
Tensile Strength, Yield	>= 620 MPa	>= 89900 psi	H1150 Condition - 620Â°C
	@Strain 0.200 %	@Strain 0.200 %	
	>= 1140 MPa	>= 165000 psi	H1050 Condition - 565Â°C
	@Strain 0.200 %	@Strain 0.200 %	
	>= 1415 MPa	>= 205200 psi	H950 Condition - 500Â°C
	@Strain 0.200 %	@Strain 0.200 %	
Elongation at Break	>= 10 %	>= 10 %	H950 Condition - 500Â°C
	>= 12 %	>= 12 %	H1050 Condition - 565Â°C
	>= 14 %	>= 14 %	H1150 Condition - 620Â°C
Reduction of Area	>= 45 %	>= 45 %	H950 Condition - 500Â°C

Mechanical Properties	$\geq 50\%$ Metric	$\geq 50\%$ English	H1050 Condition - 565Å°C Comments
	$\geq 50\%$	$\geq 50\%$	H1150 Condition - 620Å°C
Modulus of Elasticity	195 GPa	28300 ksi	
Poissons Ratio	0.278	0.278	
Shear Modulus	76.3 GPa	11100 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	10.8 Åµm/m-Å°C	6.00 Åµin/in-Å°F	
	@Temperature 21.0 - 204 Å°C	@Temperature 69.8 - 399 Å°F	
	11.3 Åµm/m-Å°C	6.28 Åµin/in-Å°F	
	@Temperature 21.0 - 427 Å°C	@Temperature 69.8 - 801 Å°F	

Component Elements Properties	Metric	English	Comments
Aluminum, Al	1.0 %	1.0 %	
Carbon, C	0.040 %	0.040 %	
Chromium, Cr	12.6 %	12.6 %	
Iron, Fe	75.91 %	75.91 %	
Molybdenum, Mo	2.15 %	2.15 %	
Nickel, Ni	8.3 %	8.3 %	

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