

Latrobe 440, N-DUR High Quality Martensitic Stainless Steel

Category : Metal , Ferrous Metal , Martensitic , Stainless Steel

Material Notes:

440 N-DUR is a 15.0% chromium stainless steel that provides the corrosion resistance of 440 C with the added benefit of improved carbide size and distribution for noiseless miniature precision bearing operation. The alloy can be through-hardened to achieve a minimum hardness of Rockwell C 60. The optimized alloy additions of C, N, Cr, and Mo provide a combination of the best carbide structure, corrosion resistance and heat treat response. The high hardness and corrosion resistance make 440 N-DUR a suitable candidate for use in miniature bearing, cutlery, medical implement, and other special applications. Tensile properties are for Austenitized at 1975°F, warm oil quenched, subzero treated to -120°F, and tempered at 350°F. 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-440-N-DUR-High-Quality-Martensitic-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	7.67 g/cc	0.277 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	61	61	RT
	50	50	
	@Temperature 371 °C	@Temperature 700 °F	
	55	55	
	@Temperature 260 °C	@Temperature 500 °F	
Tensile Strength, Ultimate	2230 MPa	324000 psi	
Tensile Strength, Yield	1910 MPa	277000 psi	
	@Strain 0.200 %	@Strain 0.200 %	
Elongation at Break	2.3 %	2.3 %	
Reduction of Area	2.1 %	2.1 %	
Modulus of Elasticity	193 - 207 GPa	28000 - 30000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	11.4 Åµm/m-Å°C	6.33 Åµin/in-Å°F	
	@Temperature 20.0 - 315 Å°C	@Temperature 68.0 - 599 Å°F	
	12.3 Åµm/m-Å°C	6.83 Åµin/in-Å°F	

Thermal Properties	Metric @Temperature 20.0 - 300.0 °C	English @Temperature 68.0 - 119.0 °F	Comments
Component Elements Properties	Metric	English	Comments
Carbon, C	0.58 %	0.58 %	
Chromium, Cr	15 %	15 %	
Iron, Fe	82.989 %	82.989 %	
Manganese, Mn	0.45 %	0.45 %	
Molybdenum, Mo	0.50 %	0.50 %	
Nitrogen, N	0.17 %	0.17 %	
Phosphorous, P	0.010 %	0.010 %	
Silicon, Si	0.30 %	0.30 %	
Sulfur, S	0.0010 %	0.0010 %	

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