Industeel URANUSÂ® 35N 23.04 Duplex Stainless Steel with PREN = 24

Category : Metal , Ferrous Metal , Duplex , Stainless Steel , T S30000 Series Stainless Steel

Material Notes:

Description: URANUSÂ® 35N (UR 35N) is a 23% Cr, 4% Nickel, Mo free duplex stainless steel (23.04). The alloy UR 35N has similar corrosion resistance properties similar to 316L. Furthermore, its mechanical properties i.e. yield strength, are twice those of 304/316 austenitic grades. This allows the designer to save weight, particularly for properly designed pressure vessel applications. The alloy is particularly suitable for applications covering the -50Â°C/+300Â°C (-58Â°F/572Â°F) temperature range. Lower temperatures may also be considered, but need some restrictions, particularly for welded structures. With its duplex microstructure, low nickel and high chromium contents, the alloy has improved stress corrosion resistance properties compared to 304 and 316 austenitic grades.Information provided by manufacturer.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Industeel-URANUS-35N-2304-Duplex-Stainless-Steel-with-PREN-24.php

Physical Properties	Metric	English	Comments
Density	7.80 g/cc	0.282 lb/inÂ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	180 - 230	180 - 230	Typical
Hardness, Rockwell C	<= 20	<= 20	Typical
Tensile Strength, Ultimate	>= 600 MPa	>= 87000 psi	
Tensile Strength, Yield	>= 400 MPa @Strain 0.200 %	>= 58000 psi @Strain 0.200 %	
	>= 440 MPa @Strain 1.00 %	>= 63800 psi @Strain 1.00 %	
Elongation at Break	>= 25 %	>= 25 %	
Modulus of Elasticity	200 GPa	29000 ksi	
Poissons Ratio	0.333	0.333	Calculated
Shear Modulus	75.0 GPa @Temperature 20.0 Â°C	10900 ksi @Temperature 68.0 Â°F	
Charpy Impact	>= 90.0 J	>= 66.4 ft-lb	
	150 J	111 ft-lb	Typical
	>= 75.0 J	>= 55.3 ft-lb	

Mechanical Properties	Metric	English	Comments
	@Temperature -50.0 Â°C	@Temperature -58.0 Â°F	
	90.0 J @Temperature -50.0 Â°C	66.4 ft-lb @Temperature -58.0 Â°F	Typical

Thermal Properties	Metric	English	Comments
CTE, linear	13.0 Âµm/m-Â°C @Temperature 20.0 - 100 Â°C	7.22 Âµin/in-Â°F @Temperature 68.0 - 212 Â°F	
	13.5 Âµm/m-Â°C @Temperature 20.0 - 200 Â°C	7.50 Âµin/in-Â°F @Temperature 68.0 - 392 Â°F	
	14.0 Âµm/m-Â°C @Temperature 20.0 - 300 Â°C	7.78 Âµin/in-Â°F @Temperature 68.0 - 572 Â°F	
Specific Heat Capacity	0.450 J/g-Â°C @Temperature 20.0 Â°C	0.108 BTU/lb-Â°F @Temperature 68.0 Â°F	
Thermal Conductivity	17.0 W/m-K @Temperature 20.0 Â°C	118 BTU-in/hr-ftÂ²-Â°F @Temperature 68.0 Â°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.020 %	0.020 %	
Chromium, Cr	23 %	23 %	
Iron, Fe	72.679 %	72.679 %	As remainder
Molybdenum, Mo	0.20 %	0.20 %	
Nickel, Ni	4.0 %	4.0 %	
Nitrogen, N	0.10 %	0.10 %	
Sulfur, S	0.0010 %	0.0010 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000800 ohm-cm @Temperature 20.0 Â°C	0.0000800 ohm-cm @Temperature 68.0 Â°F	

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