

Industeel URANUS[®] B6 N Multipurpose Austenitic Stainless Steel with PREN = 36

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel , T 600 Series Stainless Steel

Material Notes:

Description: URANUS[®] B6 (904L) is a multipurpose 20 Cr - 4.3 Mo high corrosion resistance austenitic stainless steel developed 40 years ago by CLI. The UR B6N is alloyed with nitrogen (~ 0.13%) to increase its structure stability and corrosion resistance. Due to combined additions of chromium (20%), molybdenum (4.3%), copper (1.5%) combined with its high nickel content, the grade is recommended for most applications dealing with medium to severe corrosive solutions. UR B6 has improved stress corrosion resistance properties. UR B6 alloy is particularly used in sulphuric and phosphoric acids applications. The localized corrosion resistance of UR B6N grade is much higher than that of alloy 825. UR B6N is particularly well adapted to clad plates applications (separators). Information provided by manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industeel-URANUS-B6-N-Multipurpose-Austenitic-Stainless-Steel-with-PREN-36.php

Physical Properties	Metric	English	Comments
Density	8.05 g/cc	0.291 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	160 - 210	160 - 210	Typical, V ₁₀
Tensile Strength, Ultimate	>= 550 MPa	>= 79800 psi	Minimum Guaranteed
Tensile Strength, Yield	>= 245 MPa	>= 35500 psi	
	@Strain 0.200 %	@Strain 0.200 %	
	>= 275 MPa	>= 39900 psi	
	@Strain 1.00 %	@Strain 1.00 %	
Elongation at Break	>= 40 %	>= 40 %	
Modulus of Elasticity	200 GPa	29000 ksi	
Poissons Ratio	0.333	0.333	Calculated
Shear Modulus	75.0 GPa	10900 ksi	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Charpy Impact	>= 100 J	>= 73.8 ft-lb	
	@Temperature -196 °C	@Temperature -321 °F	

Thermal Properties	Metric	English	Comments
	15.0 Åµm/m-Å°C	8.33 Åµin/in-Å°F	

Thermal Properties	Metric	English	Comments
	@ Temperature 20.0 - 100 Â°C	@ Temperature 68.0 - 212 Â°F	
	16.0 Âµm/m-Â°C	8.89 Âµin/in-Â°F	
	@Temperature 20.0 - 300 Â°C	@Temperature 68.0 - 572 Â°F	
	17.0 Âµm/m-Â°C	9.44 Âµin/in-Â°F	
	@Temperature 20.0 - 500 Â°C	@Temperature 68.0 - 932 Â°F	
Specific Heat Capacity	0.500 J/g-Â°C	0.120 BTU/lb-Â°F	
	@Temperature 20.0 Â°C	@Temperature 68.0 Â°F	
Thermal Conductivity	17.0 W/m-K	118 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 20.0 Â°C	@Temperature 68.0 Â°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.020 %	0.020 %	
Chromium, Cr	20 %	20 %	
Copper, Cu	1.5 %	1.5 %	
Iron, Fe	49.05 %	49.05 %	As remainder
Molybdenum, Mo	4.3 %	4.3 %	
Nickel, Ni	25 %	25 %	
Nitrogen, N	0.13 %	0.13 %	

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

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