

Industeel URANUS[®] B25 6 Mo Cost Saving Super-Austenitic Stainless Steel with PREN = 42

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

Material Notes:

Description: URANUS[®] B25 (UR B25) is a 18% Ni, 20% Cr, 6% Mo superaustenitic stainless steel grade with 0.2 % nitrogen additions, particularly designed to be cost effective. The 18% nickel and 0.7% copper additions combined with the chromium and molybdenum additions improve the behavior of the steel in many corrosive solutions encountered for example in chemical and petrochemical processes or chloride containing solutions. The alloy is also seawater resistant and has extensively been used in offshore industries (It has not to be used in stagnant seawater application with temperatures higher than 30[°] 86[°]F). Thanks to the 18% Nickel and the 0.2 Nitrogen additions, the microstructure is austenitic. Information provided by manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industeel-URANUS-B25-6-Mo-Cost-Saving-Super-Austenitic-Stainless-Steel-with-PREN-42.php

Physical Properties	Metric	English	Comments
Density	8.00 g/cc	0.289 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	190 - 230	190 - 230	Typical, V _{>10}
Tensile Strength, Ultimate	>= 650 MPa	>= 94300 psi	Minimum Guaranteed
Tensile Strength, Yield	>= 300 MPa @Strain 0.200 %	>= 43500 psi @Strain 0.200 %	
	>= 330 MPa @Strain 1.00 %	>= 47900 psi @Strain 1.00 %	
Elongation at Break	>= 35 %	>= 35 %	
Modulus of Elasticity	195 GPa	28300 ksi	
Poissons Ratio	0.30	0.30	Calculated
Shear Modulus	75.0 GPa @Temperature 20.0 °C	10900 ksi @Temperature 68.0 °F	
Charpy Impact	>= 60.0 J @Temperature -196 °C	>= 44.3 ft-lb @Temperature -321 °F	

Thermal Properties	Metric	English	Comments
	16.5 Åµm/m-Å°C	9.17 Åµin/in-Å°F	

Thermal Properties	Metric	English	Comments
	100 Å°C @Temperature 20.0 - 100 Å°C	212 Å°F @Temperature 68.0 - 212 Å°F	
	17.0 Åµm/m-Å°C @Temperature 20.0 - 300 Å°C	9.44 Åµin/in-Å°F @Temperature 68.0 - 572 Å°F	
	17.3 Åµm/m-Å°C @Temperature 20.0 - 500 Å°C	9.61 Åµin/in-Å°F @Temperature 68.0 - 932 Å°F	
Specific Heat Capacity	0.480 J/g-Å°C @Temperature 20.0 Å°C	0.115 BTU/lb-Å°F @Temperature 68.0 Å°F	
Thermal Conductivity	13.0 W/m-K @Temperature 20.0 Å°C	90.2 BTU-in/hr-ftÅ²-Å°F @Temperature 68.0 Å°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.010 %	0.010 %	
Chromium, Cr	20 %	20 %	
Copper, Cu	0.70 %	0.70 %	
Iron, Fe	54.989 %	54.989 %	As remainder
Molybdenum, Mo	6.1 %	6.1 %	
Nickel, Ni	18 %	18 %	
Nitrogen, N	0.20 %	0.20 %	
Sulfur, S	0.0010 %	0.0010 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000900 ohm-cm @Temperature 20.0 Å°C	0.0000900 ohm-cm @Temperature 68.0 Å°F	

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