

Industeel URANUSÂ® B66 High Strength Super-Austenitic Stainless Steel with PREN = 54

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

Material Notes:

Description: Research carried out these last five years has shown that combined additions of chromium, tungsten, molybdenum, nitrogen and copper, make it possible to design a super-austenitic stainless steel with mechanical properties equivalent to the alloy 625 and with very high corrosion resistance properties. Due to 22% Ni and 0.4% N additions, the new URANUSÂ® B66 (UR B66) alloy exhibits a very stable microstructure, less prone to intermetallic phase precipitations than the other highly alloyed austenitic stainless steels. The UR B66 alloy has improved corrosion resistance properties compared to 6 Mo grades particularly in sea water and chlorinated sea water. Due to the optimum "cocktail" of alloying elements, the grade can be used in most very severe corrosive environments where it behaves almost equivalent or better than alloy 625. Information provided by manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industeel-URANUS-B66-High-Strength-Super-Austenitic-Stainless-Steel-with-PREN-54.php

Physical Properties	Metric	English	Comments
Density	8.20 g/cc	0.296 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	220 - 260	220 - 260	Typical, V ₁₀
Tensile Strength, Ultimate	>= 750 MPa	>= 109000 psi	Minimum Guaranteed
Tensile Strength, Yield	>= 420 MPa @Strain 0.200 %	>= 60900 psi @Strain 0.200 %	
	>= 440 MPa @Strain 1.00 %	>= 63800 psi @Strain 1.00 %	
Elongation at Break	>= 50 %	>= 50 %	
Modulus of Elasticity	195 GPa	28300 ksi	
Poissons Ratio	0.30	0.30	Calculated
Shear Modulus	75.0 GPa @Temperature 20.0 Â°C	10900 ksi @Temperature 68.0 Â°F	
Charpy Impact	>= 100 J @Temperature -196 Â°C	>= 73.8 ft-lb @Temperature -321 Â°F	

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear	@Temperature 20.0 - 100 Å°C	@Temperature 68.0 - 212 Å°F	
	16.0 Åµm/m-Å°C	8.89 Åµin/in-Å°F	
	@Temperature 20.0 - 300 Å°C	@Temperature 68.0 - 572 Å°F	
	16.5 Åµm/m-Å°C	9.17 Åµin/in-Å°F	
	@Temperature 20.0 - 500 Å°C	@Temperature 68.0 - 932 Å°F	
Specific Heat Capacity	0.450 J/g-Å°C	0.108 BTU/lb-Å°F	
	@Temperature 20.0 Å°C	@Temperature 68.0 Å°F	
Thermal Conductivity	12.0 W/m-K	83.3 BTU-in/hr-ftÅ²-Å°F	
	@Temperature 20.0 Å°C	@Temperature 68.0 Å°F	

Component Elements Properties	Metric	English	Comments
Chromium, Cr	24 %	24 %	
Copper, Cu	1.5 %	1.5 %	
Iron, Fe	<= 41.1 %	<= 41.1 %	As remainder
Manganese, Mn	3.0 %	3.0 %	
Molybdenum, Mo	6.0 %	6.0 %	
Nickel, Ni	22 %	22 %	
Nitrogen, N	>= 0.40 %	>= 0.40 %	
Tungsten, W	2.0 %	2.0 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.000100 ohm-cm	0.000100 ohm-cm	
	@Temperature 20.0 Å°C	@Temperature 68.0 Å°F	

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