

Industeel URANUS® B26 6 Mo High Performance Super-Austenitic Stainless Steel with PREN = 43

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel

Material Notes:

Description: URANUS® B26 (UR B26) is a 25% Ni, 20% Cr, 6% Mo superaustenitic stainless steel grade with 0.2 % nitrogen additions, particularly designed for high structural stability and high corrosion resistance properties. The 25% nickel and 1% 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. The alloy behaves particularly well in sulphuric acid solutions and is well adapted for pollution control equipments (scrubbers...) The alloy is also seawater resistant and has extensively been used in offshore industries. The fully austenitic microstructure produced by the 25% nickel addition explains its high toughness at temperatures as low as -200°C (-328°F). Information provided by manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industeel-URANUS-B26-6-Mo-High-Performance-Super-Austenitic-Stainless-Steel-with-PREN-43.php

Physical Properties	Metric	English	Comments
Density	8.10 g/cc	0.293 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	180 - 220	180 - 220	Typical, V ₁₀
Tensile Strength, Ultimate	>= 650 MPa	>= 94300 psi	Minimum Guaranteed
Tensile Strength, Yield	>= 320 MPa @Strain 0.200 %	>= 46400 psi @Strain 0.200 %	
	>= 350 MPa @Strain 1.00 %	>= 50800 psi @Strain 1.00 %	
Elongation at Break	>= 40 %	>= 40 %	
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	>= 100 J @Temperature -196 °C	>= 73.8 ft-lb @Temperature -321 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	15.8 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	8.78 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 20.0 - 100 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 212 $\text{Å}^\circ\text{F}$	
	16.5 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	9.17 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 20.0 - 300 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 572 $\text{Å}^\circ\text{F}$	
	17.3 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	9.61 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
	@Temperature 20.0 - 500 $\text{Å}^\circ\text{C}$	@Temperature 68.0 - 932 $\text{Å}^\circ\text{F}$	
Specific Heat Capacity	0.450 J/g- $\text{Å}^\circ\text{C}$	0.108 BTU/lb- $\text{Å}^\circ\text{F}$	
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	
Thermal Conductivity	13.0 W/m-K	90.2 BTU-in/hr-ft Å^2 - $\text{Å}^\circ\text{F}$	
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.010 %	0.010 %	
Chromium, Cr	20.5 %	20.5 %	
Copper, Cu	1.0 %	1.0 %	
Iron, Fe	46.989 %	46.989 %	As remainder
Molybdenum, Mo	6.3 %	6.3 %	
Nickel, Ni	25 %	25 %	
Nitrogen, N	0.20 %	0.20 %	
Sulfur, S	0.0010 %	0.0010 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000950 ohm-cm	0.0000950 ohm-cm	
	@Temperature 20.0 $\text{Å}^\circ\text{C}$	@Temperature 68.0 $\text{Å}^\circ\text{F}$	

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