

Industeel URANUS[®] B28 High Nickel Super-Austenitic Stainless Steel

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel

Material Notes:

Description: URANUS[®] B28 (UR B28) is a super-austenitic stainless steel with very high nickel (31%) and chromium (27%) contents. The molybdenum content is about 3.5%. The alloy is designed for specific purposes, including sulphuric or phosphoric acid applications. It behaves particularly well in sulphuric and phosphoric acid environments, even when contaminated by chlorides and fluorides species. The high nickel content improves its stress corrosion cracking resistance. The combined chromium and molybdenum additions contribute to increase the localized corrosion resistance. The alloy behaves much better than alloy 825 and could be considered in some applications (sour gas) to replace the more expensive 625 grade. The alloy is extensively used in chemical and offshore applications including very sour gas fields. Information provided by manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industeel-URANUS-B28-High-Nickel-Super-Austenitic-Stainless-Steel.php

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

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	250 - 310	250 - 310	Typical, V ₁₀
Tensile Strength, Ultimate	>= 500 MPa	>= 72500 psi	Minimum Guaranteed
Tensile Strength, Yield	>= 220 MPa @Strain 0.200 %	>= 31900 psi @Strain 0.200 %	
	>= 250 MPa @Strain 1.00 %	>= 36300 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
	15.8 Åµm/m-Å°C	8.78 Åµin/in-Å°F	

Thermal Properties	Metric	English	Comments
	@ Temperature 20.0 - 200 Å°C	@ Temperature 68.0 - 392 Å°F	
	16.5 Åµm/m-Å°C	9.17 Åµin/in-Å°F	
	@Temperature 20.0 - 300 Å°C	@Temperature 68.0 - 572 Å°F	
	17.3 Åµm/m-Å°C	9.61 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
Carbon, C	<= 0.020 %	<= 0.020 %	
Chromium, Cr	27 %	27 %	
Copper, Cu	1.0 %	1.0 %	
Iron, Fe	37.43 - 37.45 %	37.43 - 37.45 %	As remainder
Molybdenum, Mo	3.5 %	3.5 %	
Nickel, Ni	31 %	31 %	
Nitrogen, N	0.050 %	0.050 %	

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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