

Industeel CLC 17.13.5 LN Modified 317LN Mo 4% Austenitic Stainless Steel

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

Material Notes:

Description: CLC 17-13-5LN (317LNM) is a Nitrogen alloyed austenitic stainless steel with a high Molybdenum addition (=4%). Alloy CLC 17-13-5LN (317LNM) exhibits austenitic microstructure free of deleterious carbide precipitations in grain boundaries. The grade contains some residual ferrite (=2%) after solution annealing (1100 - 1150Â°C / 2012 - 2102Â°F) and water quenching. Its low carbon content avoids the intergranular corrosion, even on welded pieces without an ulterior water quenching. The high Molybdenum content gives this steel a higher resistance to corrosion in chloride containing environments than standard grades (CLC17-12-2L / 316L). Nitrogen additions and a low silicon content have a stabilizing effect on austenitic structure reducing, therefore, precipitation of inter-metallic phases during welding. Nitrogen addition also increases the yield strength compared to CLC 18-15-4L (317L). Its main properties are : high ductility, easy weldability and high corrosion resistance. The main applications are chemical and petrochemical applications, pollution control equipments and chemical tankers. Information provided by manufacturer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Industeel-CLC-17135-LN-Modified-317LN-Mo-4-Austenitic-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	8.00 g/cc	0.289 lb/inÂ³	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	>= 590 MPa	>= 85600 psi	
Tensile Strength, Yield	>= 285 MPa	>= 41300 psi	
	@Strain 0.200 %	@Strain 0.200 %	
	>= 315 MPa	>= 45700 psi	
	@Strain 1.00 %	@Strain 1.00 %	
Elongation at Break	>= 40 %	>= 40 %	
Modulus of Elasticity	200 GPa	29000 ksi	
	@Temperature 20.0 - 100 Â°C	@Temperature 68.0 - 212 Â°F	
Poissons Ratio	0.299	0.299	Calculated
Shear Modulus	77.0 GPa	11200 ksi	
	@Temperature 20.0 - 100 Â°C	@Temperature 68.0 - 212 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear	16.0 Âµm/m-Â°C	8.89 Âµin/in-Â°F	

Thermal Properties	Metric @Temperature 20.0 - 100 Â°C	English @Temperature 68.0 - 212 Â°F	Comments
	16.5 Âµm/m-Â°C	9.17 Âµin/in-Â°F	
	@Temperature 20.0 - 200 Â°C	@Temperature 68.0 - 392 Â°F	
	17.0 Âµm/m-Â°C	9.44 Âµin/in-Â°F	
	@Temperature 20.0 - 300 Â°C	@Temperature 68.0 - 572 Â°F	
	18.0 Âµm/m-Â°C	10.0 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 - 100 Â°C	@Temperature 68.0 - 212 Â°F	
Thermal Conductivity	14.0 W/m-K	97.2 BTU-in/hr-ftÂ²-Â°F	
	@Temperature 20.0 - 100 Â°C	@Temperature 68.0 - 212 Â°F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.020 %	0.020 %	
Chromium, Cr	18.2 %	18.2 %	
Iron, Fe	63.43 %	63.43 %	As remainder
Molybdenum, Mo	4.2 %	4.2 %	
Nickel, Ni	14 %	14 %	
Nitrogen, N	0.15 %	0.15 %	

Electrical Properties	Metric	English	Comments
	0.0000800 ohm-cm	0.0000800 ohm-cm	
Electrical Resistivity	@Temperature 20.0 - 100 Â°C	@Temperature 68.0 - 212 Â°F	

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