

Carlson 926 Mo Austenitic Stainless Steel

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel

Material Notes:

General Description Carlson alloy 926 Mo is a "super-austenitic" 6% molybdenum stainless steel that provides excellent resistance to a variety of highly corrosive environments. This alloy performs well in high chloride process streams where pitting, crevice corrosion and stress corrosion cracking may occur. It has excellent general corrosion resistance in sulfuric, phosphoric and organic acids, especially when they contain chloride impurities. The high chromium and nickel content of 926 Mo provides general corrosion resistance in both oxidizing and reducing environments. The combination of molybdenum and nitrogen resists pitting and crevice corrosion, while copper enhances resistance to sulfuric acid, and nitrogen increases tensile and yield strengths. 926 Mo can be utilized as a replacement for conventional austenitic stainless steels (316L, 317L) that fail due to pitting, crevice corrosion or chloride stress corrosion cracking. The strength of 926 Mo is approximately 50% higher than 316L, allowing opportunities for construction economies through the use of thinner sections. In numerous applications, 926 Mo can be a cost-effective substitute for nickel alloys.

Applications 926 Mo is especially suited for high-chloride environments such as brackish water, sea water, caustic chlorides, and pulp mill bleaching systems. It also resists sulfuric, phosphoric and organic acids.

Biotechnology & Pharmaceuticals – vessels, reactors, freeze tanks, filters, columns, piping.

Chemical Processing – phosphoric and sulfuric acids – evaporators, tanks, pressure vessels, heat exchangers and piping, Tall oil distillation columns. Salt plants – sodium chloride and sodium chlorate.

Desalinization Systems

Food Processing Equipment

Offshore Oil and Gas Production – flue gas desulphurization (FGD) systems – scrubbers, quenches, absorbers and ducts, marine tanker inert-gas systems.

Power Generation – condensers, service water pumps, feedwater heaters.

Pulp and Paper – bleaching plants (Chlorine dioxide stage), washers, vats, tanks, press rolls, piping.

Information provided by Carlson

Order this product through the following link:

http://www.lookpolymers.com/polymer_Carlson-926-Mo-Austenitic-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	8.03 g/cc	0.290 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	<= 86	<= 86	
Tensile Strength at Break	>= 648 MPa	>= 94000 psi	
Tensile Strength, Yield	>= 296 MPa @Strain 0.200 %	>= 43000 psi @Strain 0.200 %	
Elongation at Break	>= 35 %	>= 35 %	
Modulus of Elasticity	192 GPa	27800 ksi	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.020 %	<= 0.020 %	
Chromium, Cr	19 - 21 %	19 - 21 %	

Component Elements Properties	Metric	English	Comments
Copper, Cu	0.50 - 1.5 %	0.50 - 1.5 %	
Iron, Fe	41.69 - 50.35 %	41.69 - 50.35 %	
Manganese, Mn	<= 2.0 %	<= 2.0 %	
Molybdenum, Mo	6.0 - 7.0 %	6.0 - 7.0 %	
Nickel, Ni	24 - 26 %	24 - 26 %	
Nitrogen, N	0.15 - 0.25 %	0.15 - 0.25 %	
Phosphorous, P	<= 0.030 %	<= 0.030 %	
Silicon, Si	<= 0.50 %	<= 0.50 %	
Sulfur, S	<= 0.010 %	<= 0.010 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000800 ohm-cm	0.0000800 ohm-cm	

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