

## **Carlson 317L 4N Austenitic Stainless Steel**

Category : Metal , Ferrous Metal , Austenitic , Stainless Steel

## Material Notes:

General DescriptionCarlson's 317L, 317L 4, and 317L 4N are austenitic chromium-nickel-molybdenum stainless steels with alloy contents greater than the 316 grades. The additional chromium, nickel and molybdenum present in these alloys provide superior corrosion resistance in severe environments and higher creep rupture and tensile strengths at elevated temperatures than other stainless steels. The low carbon content of these grades minimizes the possibility of intergranular attack.317L 4 has a higher nickel and molybdenum content than 317L for improved corrosion resistance. In 317L 4N, nitrogen is added to 317L 4 for even better corrosion resistance and increased strength.Applications317L, 317L 4, and 317L 4N have been utilized in numerous highly corrosive environments includingFlue Gas Desulphurization Systems – Inlet and outlet ductwork, absorber towers, stack liners, slurry tanks, and piping systemsChemical and Petrochemical Processing – Pressure vessels, heat exchangers, tanks, pipe, valves, and fittingsPulp and Paper Plants.Information provided by Carlson

## Order this product through the following link:

http://www.lookpolymers.com/polymer\_Carlson-317L-4N-Austenitic-Stainless-Steel.php

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

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	<= 223	<= 223	
Hardness, Rockwell B	<= 96	<= 96	
Tensile Strength at Break	>= 552 MPa	>= 80000 psi	
Tensile Strength, Yield	>= 241 MPa	>= 35000 psi	
	@Strain 0.200 %	@Strain 0.200 %	
Elongation at Break	>= 40 %	>= 40 %	

Thermal Properties	Metric	English	Comments
CTE, linear	16.6 µm/m-°C	9.20 µin/in-°F	
	@Temperature 0.000 - 100 °C	@Temperature 32.0 - 212 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.030 %	<= 0.030 %	
Chromium, Cr	18 - 20 %	18 - 20 %	
Iron, Fe	54.445 - 65.4 %	54.445 - 65.4 %	



Component Elements Properties	Metric *	English	Comments
Molybdenum, Mo	4.0 - 5.0 %	4.0 - 5.0 %	
Nickel, Ni	13.5 - 17.5 %	13.5 - 17.5 %	
Nitrogen, N	0.10 - 0.20 %	0.10 - 0.20 %	
Silicon, Si	<= 0.75 %	<= 0.75 %	
Sulfur, S	<= 0.030 %	<= 0.030 %	

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