

# P316L STAINLESS STEEL

## DESCRIPTION

P316L offers the highest degree of corrosion protection that is available in a standard P/M stainless steel grade. It provides very good strength at extremely high temperatures. AMETEK's 316L product includes many fully customized powder specifications by varying lubricant type, content and particle size. We are able to manufacture high quality 316L powders to fit your applications.



PRODUCT	POWDER PROPERTIES		COMPACTING PRESSURE (TSI)	GREEN STRENGTH (PSI)	GREEN DENSITY (GM/CC)	SINTERED DENSITY (GM/CC)	SINTERED BREAKING STRENGTH (PSI)	DIMENSIONAL CHANGE FROM DIE SIZE (%)	UTS (PSI)	% ELONG	RB HARDNESS (APPARENT)
	APPARENT DENSITY (GM/CC)	FLOW (SEC./50G)									
P316L	2.7	30	30	400	6.25	6.35	75,000	-0.53	42,000	3.6	41.0
			40	700	6.60	6.60	103,000	-0.44	50,000	4.8	48.0
			50	1100	6.83	6.83	125,000	-0.40	58,000	6.0	67.0

Compacting properties were measured on powder blended with 1% lithium stearate. Sintering was done in dissociated ammonia at 2050°F for 45 minutes.

*The data herein are subject to revision without notice. Since AMETEK products, and the information given and recommendations made herein, may be used under conditions beyond our control, AMETEK makes no guarantee, either express or implied, concerning the sustainability of our products, or the applicability and accuracy of the information, or recommendations, in any specific situation. User is solely responsible for determining the suitability of AMETEK products of any specific purpose.*

# P316L POWDER SPECIFICATIONS

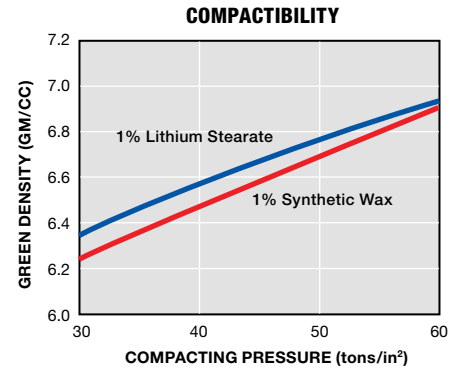
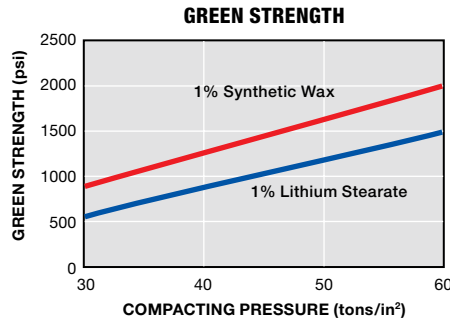
## POWDER PROPERTIES

### Chemical Composition

Chromium: 16.0-18.0%  
 Nickel: 10.0-14.0%  
 Molybdenum: 2.0-3.0%  
 Manganese: 2.0% Max.  
 Silicon: 1.0% Max.  
 Carbon: 0.03% Max.  
 Sulfur: 0.03% Max.  
 Phosphorus: 0.045% Max.  
 Iron: Balance

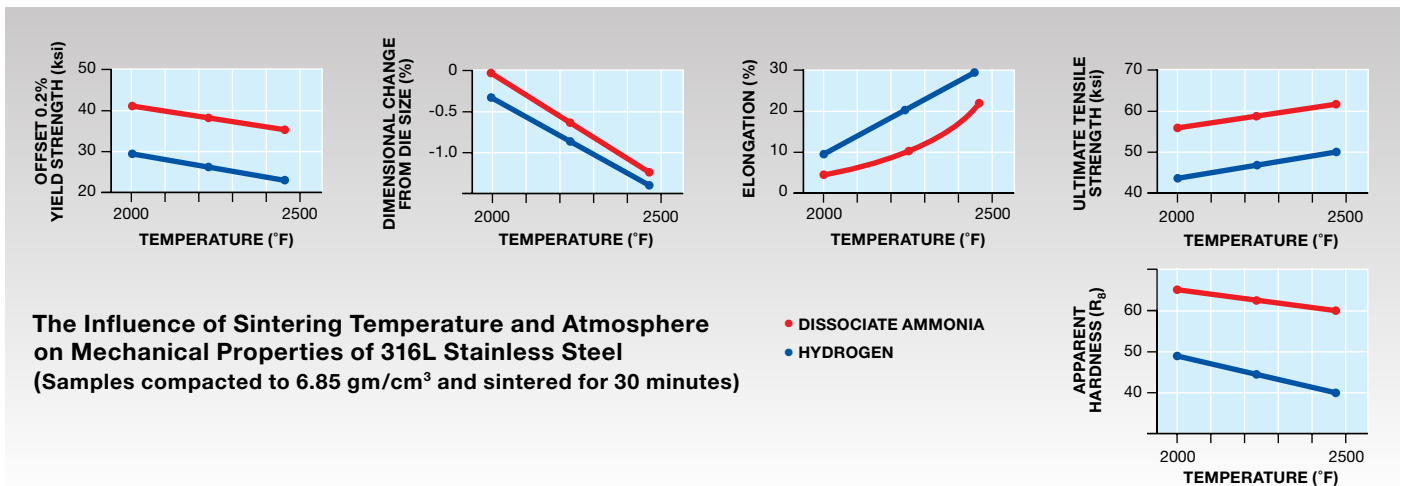
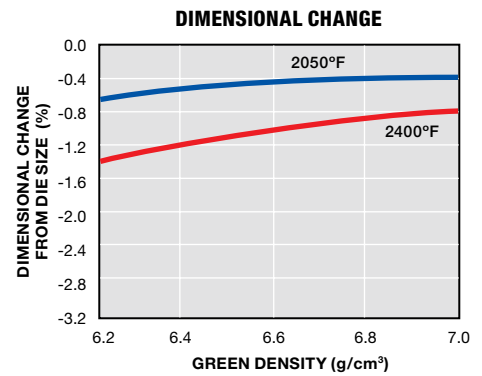
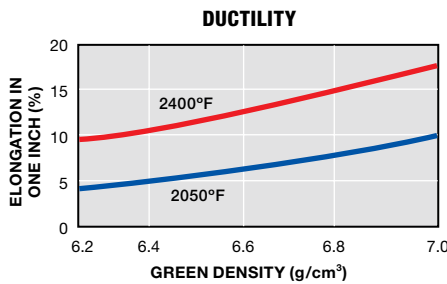
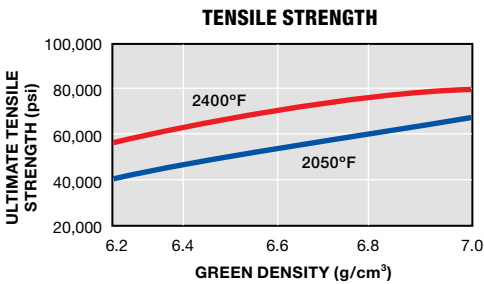
### Physical Properties

Apparent Density: 2.7 g/cm<sup>3</sup>  
 Flow Rate: 30 sec/50g



## SINTERED PROPERTIES

Sintered properties were determined using test specimens that were sintered for 45 minutes in dissociated ammonia with a -40°F dew point.



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