

P410L Stainless Steel

DESCRIPTION

P410L is a magnetic grade of stainless steel. An excellent candidate for automotive sensor ring and mirror mount applications, P410L exhibits fair corrosion resistance and a decent high temperature sintering response. Major performance features of this stainless steel include green strength and high compressibility.

Carbon Additions: Fractions of graphite can be admixed for increase hardenability in 410 SS powder.



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)									
P410L	2.8	30	30	1500	6.00	6.13	85,000	-0.31	41,000	3.6	42.0
			40	1800	6.45	6.55	105,000	-0.28	54,000	4.8	71.0
			50	2200	6.60	6.67	120,000	-0.24	64,000	5.3	80.0

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

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POWDER PROPERTIES

Chemical Composition

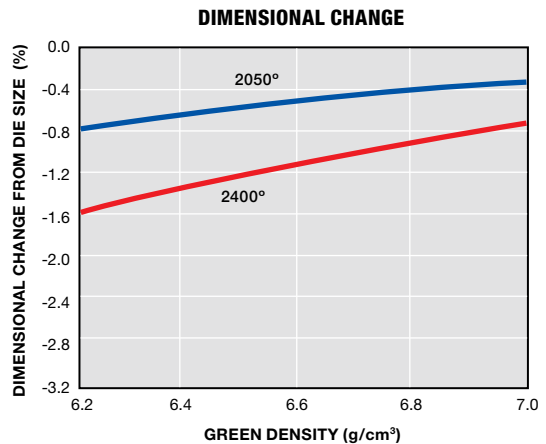
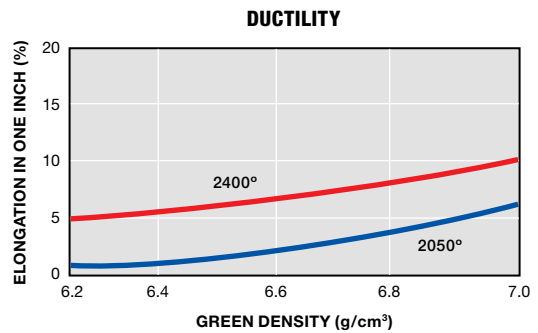
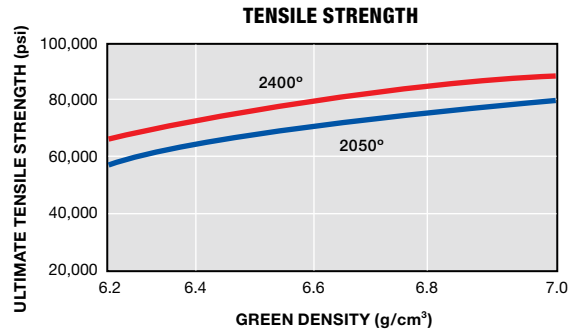
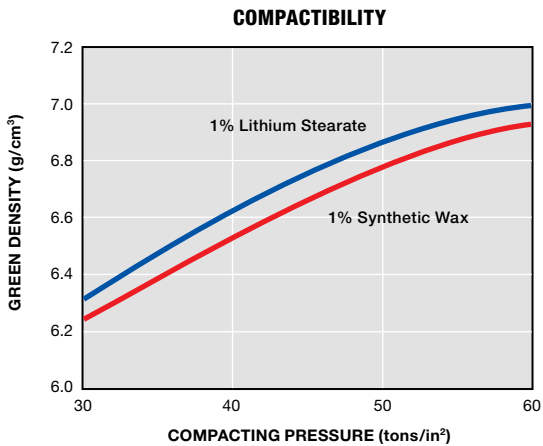
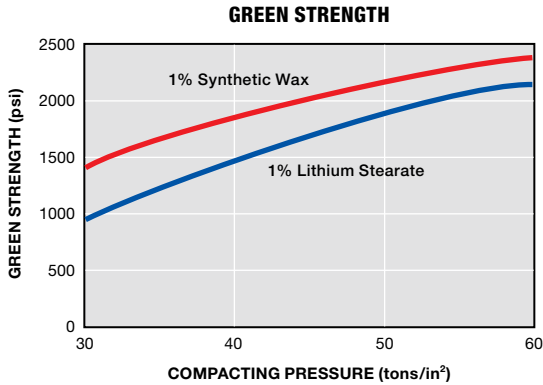
Chromium: 11.5-13.5%
 Manganese: 2.0% max
 Silicon: 1.0% max
 Carbon: 0.03% max
 Sulfur: 0.03% max
 Phosphorus: 0.04% max
 Iron: Balance

Physical Properties

Apparent Density: 2.8 g/cm³
 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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