

# 410L POWDER STAINLESS STEEL

## TECHNICAL DATA SHEET

### DESCRIPTION

410L is a magnetic grade of stainless steel. An excellent candidate for automotive sensor ring and mirror mount applications, 410L 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 (PSI)	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)									
410L	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

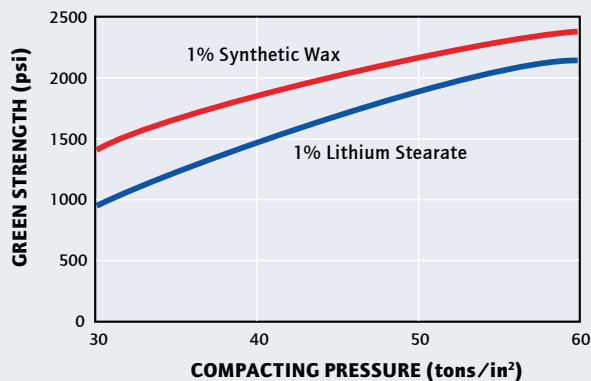
Compacting properties were measured on powder blended with 1% lithium stearate. Sintering was done in dissociated ammonia at 2050°F for 45 minutes.

### POWDER PROPERTIES

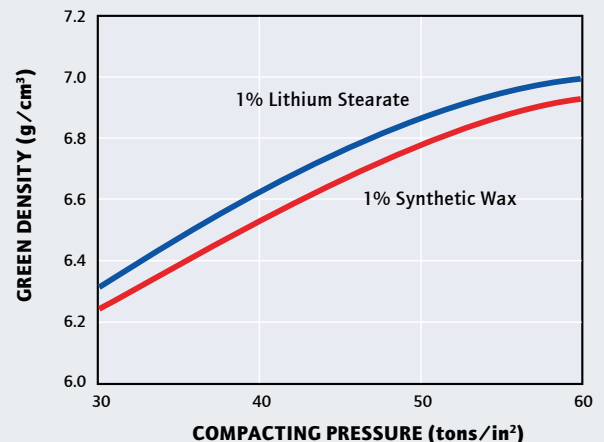
CHEMICAL COMPOSITION			
Chromium	11.5 - 13.5%	Sulfur	0.03% max
Manganese	1.0% max	Phosphorus	0.04% max
Silicon	1.0% max	Iron	Balance
Carbon	0.03% max		

PHYSICAL PROPERTIES	
Apparent Density	2.8 g/cm <sup>3</sup>
Flow Rate	30 sec/50g

### GREEN STRENGTH



### COMPACTIBILITY

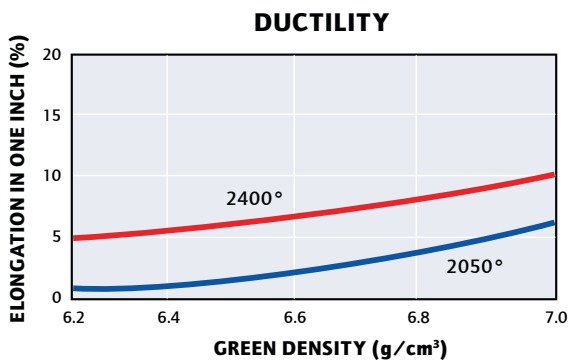
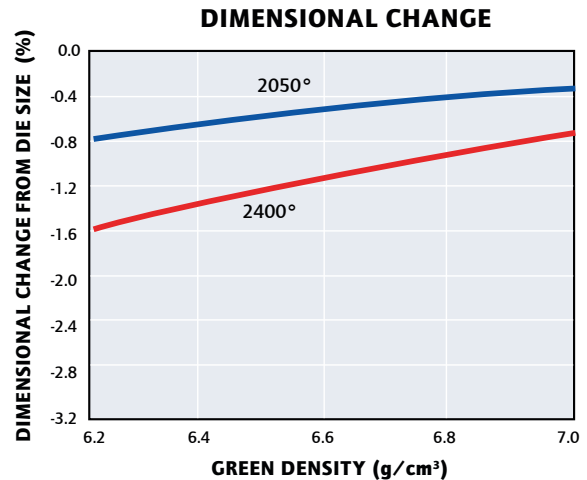
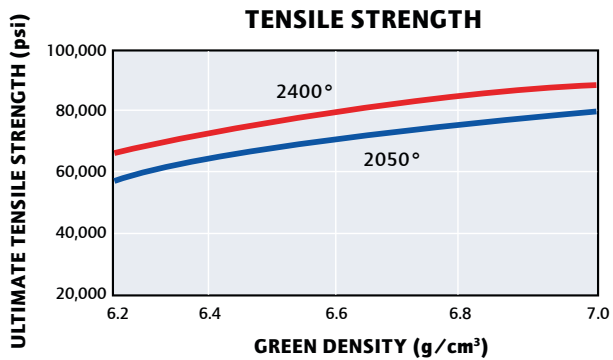


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### SINTERED PROPERTIES

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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