304L POWDER STAINLESS STEEL

TECHNICAL DATA SHEET

DESCRIPTION

304L is a corrosion resistant material that exhibits good property stability below 1000°F. 304L is often the most practical stainless steel choice for parts that need the benefit of an austenitic grade. 304L exhibits better overall corrosion resistance than 303L.

This material is a good choice for parts that will not be subjected to demanding machining operations. A major benefit of this material is the balance of good material performance and economical cost.

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)									
304L	2.7	30	30	410	6.25	6.33	73,000	- 0.53	40,000	3.4	40.0
			40	900	6.50	6.60	94,000	- 0.44	50,000	4.2	49.0
			50	1120	6.70	6.80	115,000	- 0.39	56,000	5.4	68.0

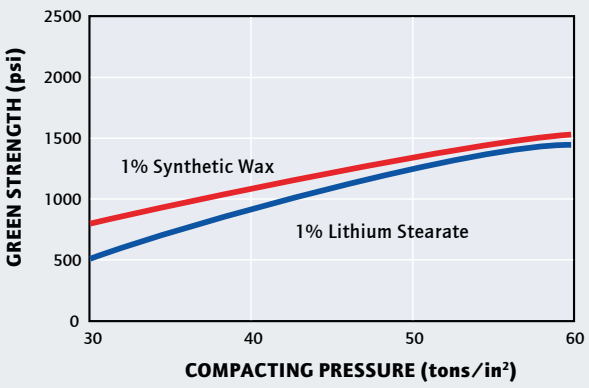
Compacting properties were measured on powder blended with 1% lithium stearate. Sintering was done in dissociated ammonia at 2050°F for 45 minutes.

POWDER PROPERTIES

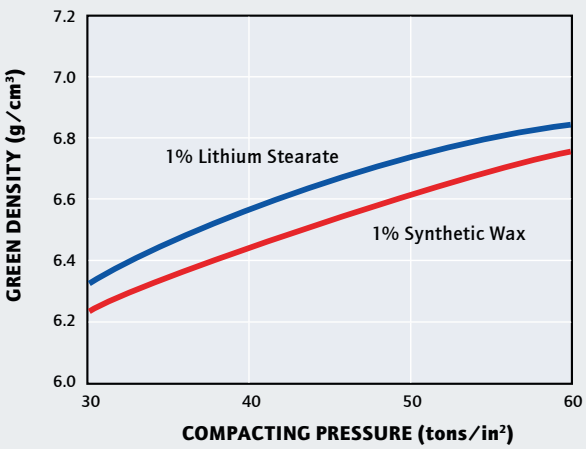
CHEMICAL COMPOSITION			
Chromium	18 - 20%	Carbon	0.03% max
Nickel	8 - 12%	Sulfur	0.03% max
Manganese	2% max	Phosphorus	0.045% max
Silicon	1% max	Iron	Balance

PHYSICAL PROPERTIES	
Apparent Density	2.8 g/cm³
Flow Rate	30 sec/50g

GREEN STRENGTH



COMPACTIBILITY



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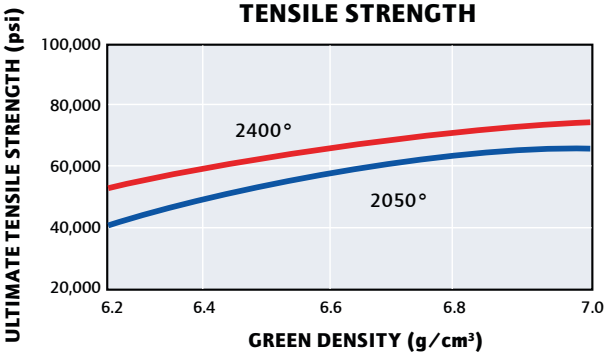
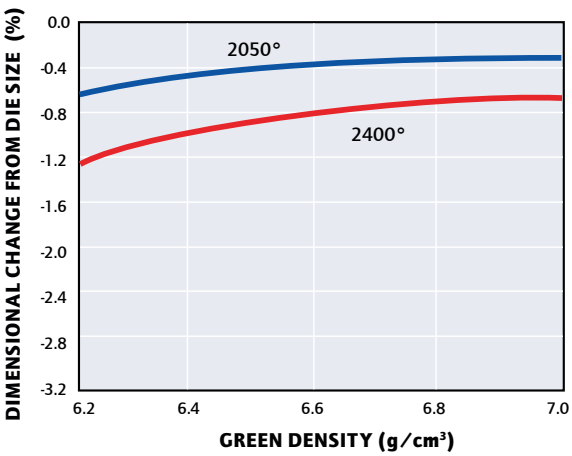
SINTERED PROPERTIES

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

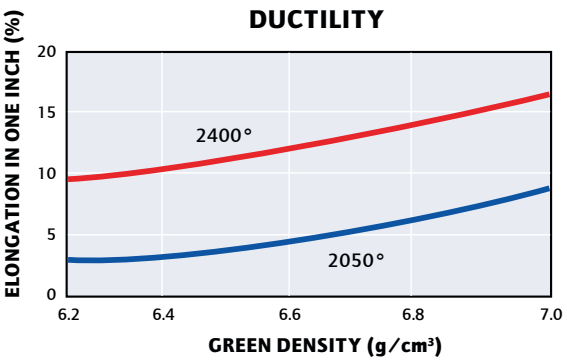
TENSILE STRENGTH



DIMENSIONAL CHANGE



DUCTILITY



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