303L POWDER STAINLESS STEEL

TECHNICAL DATA SHEET

DESCRIPTION

303L is a free machining, austenitic grade that offers moderate corrosion resistance. This stainless steel is sintered in either a partial vacuum or a hydrogren atmosphere to improve ductility and corrosion resistance. 303L is a sulfurized grade that is an excellent option for parts that require secondary machining operations, such as food service equipment, pump components and non-magnetic housings.

ADDITIVES

303L can also be admixed with MnS or MoS_2 for added machinability.

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)									
303L	2.8	30	30	380	6.23	6.33	71,000	- 0.54	41,000	3.4	41.0
			40	900	6.50	6.60	91,000	- 0.44	51,000	4.8	50.0
			50	1030	6.70	6.75	109,000	- 0.40	54,000	5.8	68.0

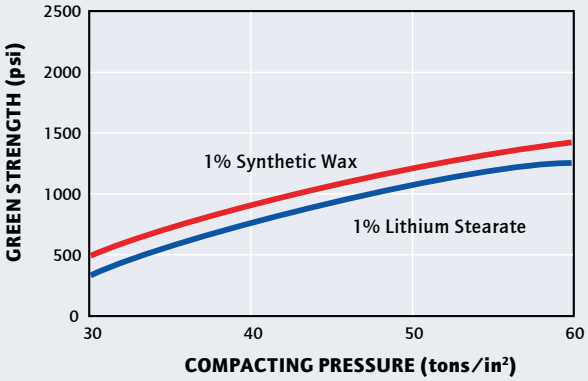
Compacting properties were measured on powder blended with 1% lithium stearate. Sintering was done in dissociated ammonia at 2050°F for 45 minutes.

POWDER PROPERTIES

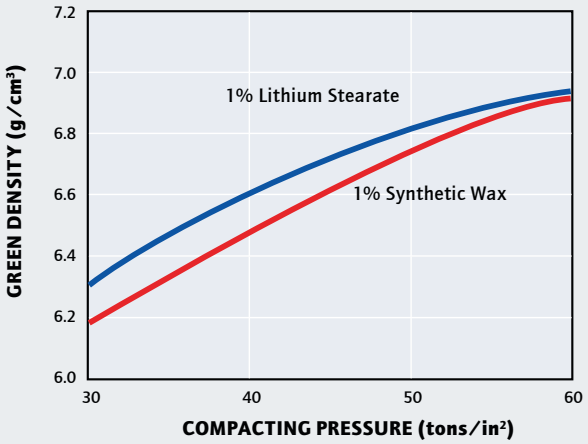
CHEMICAL COMPOSITION			
Chromium	17 - 19%	Sulfur	0.15 - 0.30%
Nickel	8 - 13%	Carbon	0.03% max
Manganese	1% max	Phosphorus	0.045% max
Silicon	1% max	Iron	Balance

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

GREEN STRENGTH



COMPACTIBILITY

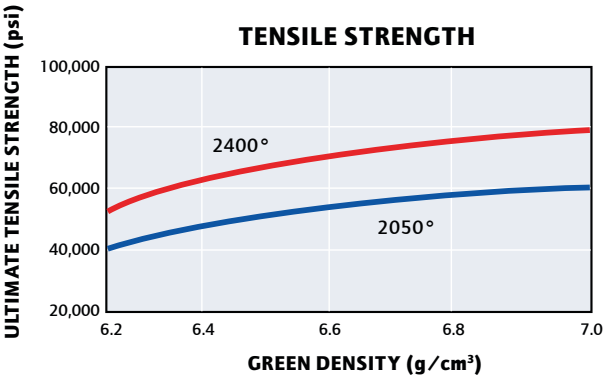


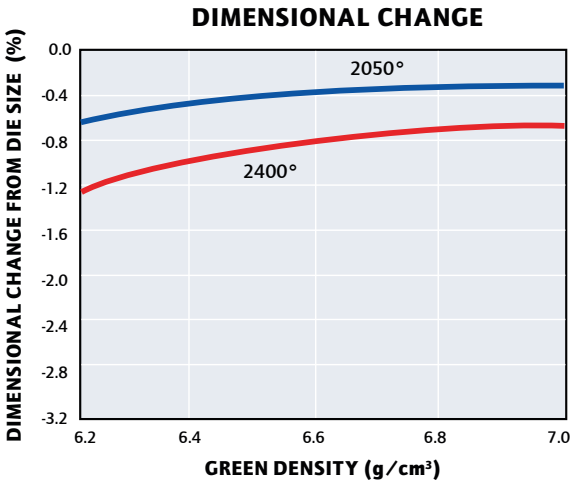
303L POWDER STAINLESS STEEL

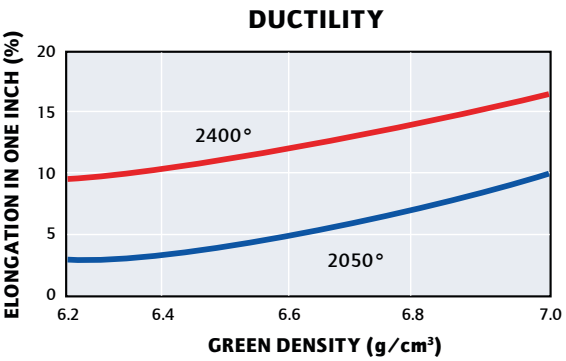
TECHNICAL DATA SHEET

SINTERED PROPERTIES

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







AMETEK®
SPECIALTY METAL PRODUCTS

1085 Route 519, Eighty Four, PA 15330, United States
E: EF.sales@ametek.com | **T:** (+1) 724-225-8400

www.powderclad.com