

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 hydrogen 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 MoS₂ 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

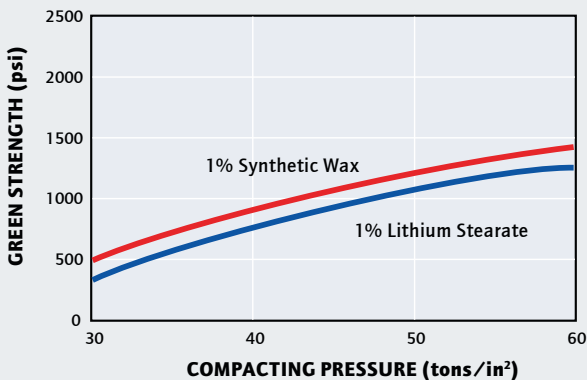
Compacting properties were measured on powder blended with 1% lithium stearate. Sintering was done in dissociated ammonia at 2050°F for 45 minutes.

POWDER PROPERTIES

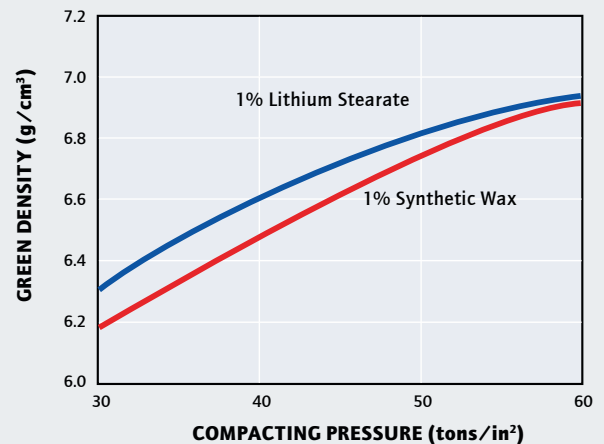
CHEMICAL COMPOSITION			
Chromium	17 - 19%	Sulfur	0.15 - 0.30%
Nickel	8 - 13%	Carbon	0.03% max
Manganese	1% max	Phosphorus	0.045% max
Silicon	1% max	Iron	Balance

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

GREEN STRENGTH



COMPACTIBILITY



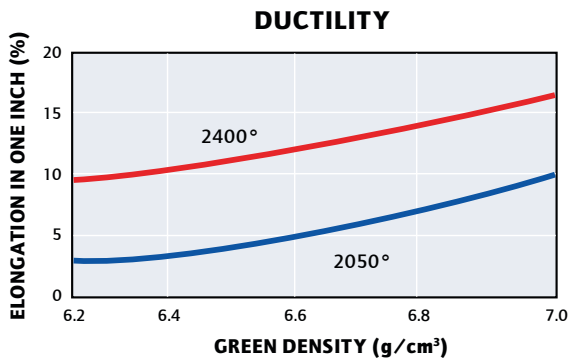
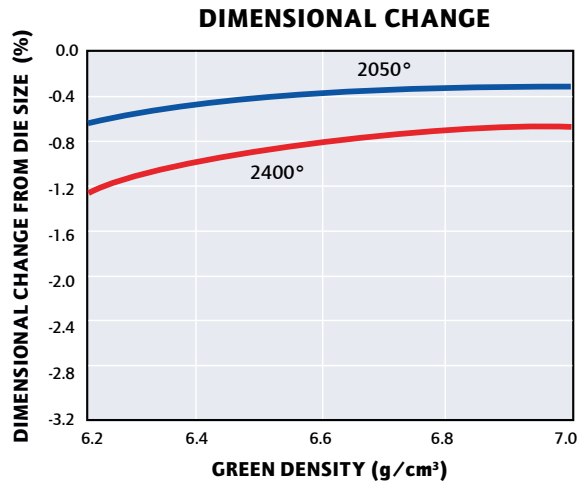
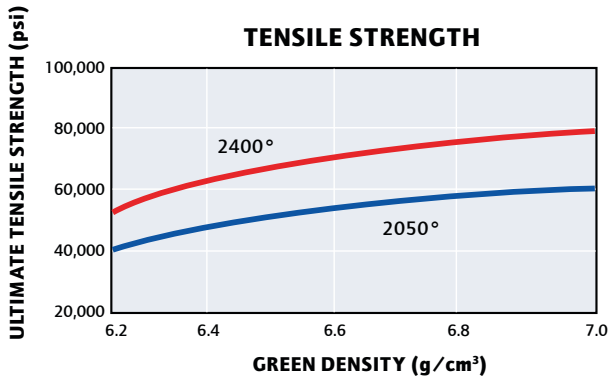
303L POWDER STAINLESS STEEL

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.



EIGHTY FOUR / 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

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.