

430L Stainless Steel

DESCRIPTION

Low-carbon ferritic stainless steels, in mildly corrosive environments or atmospheric exposures, have corrosion resistance approaching that of some nickel stainless steels. These alloys are oxidation resistant at elevated temperatures. Type 430 alloys are ductile and do not work-harden readily.

The toughness—defined as resistance to crack propagation or notch strength—of ferritic steels is relatively low, and the ductile-to-brittle transition temperature is at or above room temperature.

The corrosion and oxidation resistances of the ferritic steels are directly related to their chromium content. The 17% Cr 430 steel alloys have good corrosion resistance to atmospheric conditions.

These alloys are used in a variety of applications where corrosion resistance is more important than strength.

CORROSION RESISTANCE

These alloys are resistant to attack in a wide variety of corrosion media.

RESISTANCE TO OXIDATION

Types 430 alloys resist oxidation at temperatures up to 1600°F for intermittent service, and from 1450°F to 1500°F for continuous service. The scale formed is tightly adherent and not easily shed during sudden temperature changes. Since the rate of oxidation is greatly affected by the atmosphere involved, by the heating and cooling cycles, and by the structural design, no actual data can be presented which would apply to all service conditions.



PHYSICAL PROPERTIES

Density: 0.276 lbs/in³

Specific Gravity: 7.65

RESPONSE TO HIGH-TEMPERATURE EXPOSURE

These alloys become susceptible to intergranular corrosion in certain environments when cooled in air from temperatures of about 1500 F. The sensitivity to intergranular attack may be accomplished by a decrease in ductility. Normal corrosion resistance and ductility are restored by annealing.

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.

430L Stainless Steel

POWDER PROPERTIES

Chemical Composition

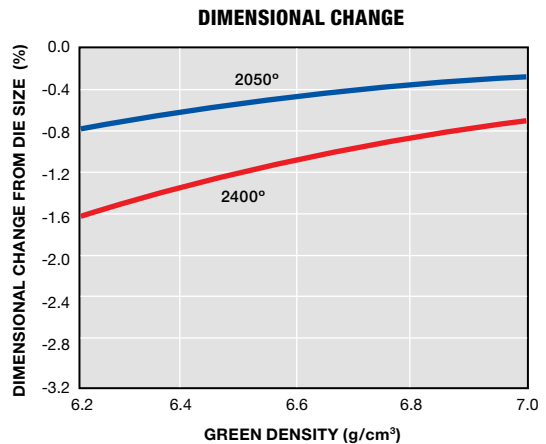
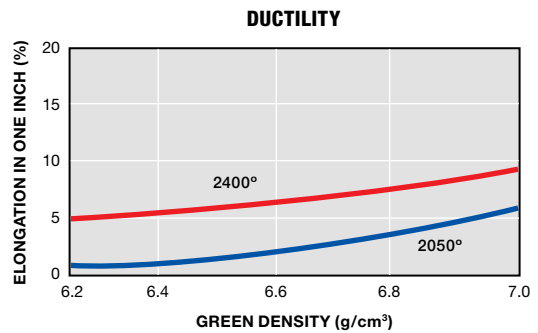
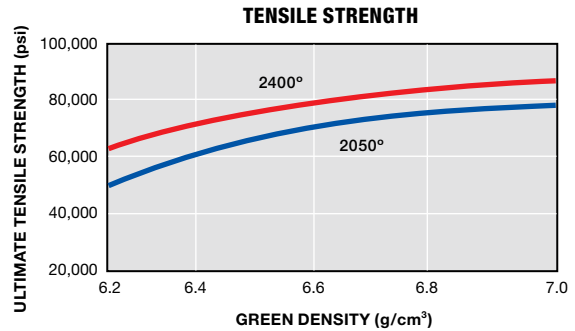
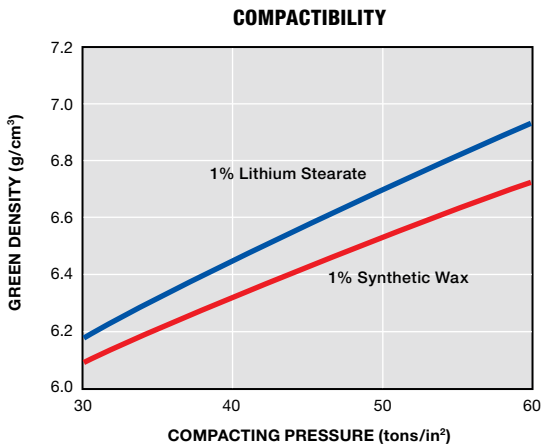
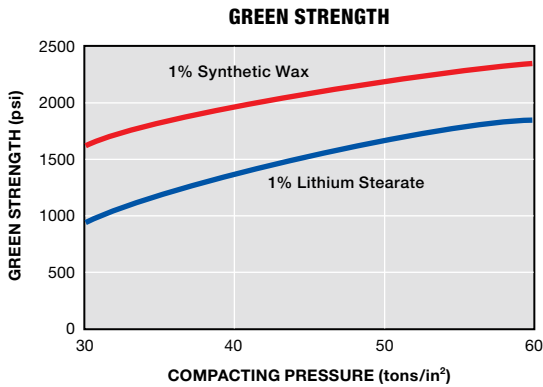
Chromium: 16-18%
 Silicon: 1.0% max
 Manganese: 1.0% max
 Carbon: 0.03% max
 Sulfur: 0.03% max
 Phosphorus: 0.04% max
 Iron: Balance

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.



1085 Route 519 • Eighty Four, PA 15330 USA • Tel: 724-225-8400 • Fax: 724-225-6622
 E-mail: EF.Sales@ametek.com

www.ametekmetals.com

©2018 by AMETEK, Inc. All rights reserved.