

# SS 436



## SS 436 (UNS S43600)

SS 436 is a corrosion and heat resistant ferritic Chromium Steel. It can be polished to appear similar to Chromium plate. The material is magnetic in both annealed and cold rolled tempers. This grade of ferritic stainless steel has shown a greater resistance to ridging or roping defects as compared to type 430 stainless steel.

### GENERAL INFORMATION

The alloy can be readily blanked and formed. The material can be resistance welded, brazed, and soldered. SS 436 is resistant to atmospheric corrosion and fresh water, but it not resistant to most salts and seawater. It is resistant to scaling by oxidation up to about 1400°F.

### AVAILABILITY

SS 436 is available from Hamilton Precision Metals as strip product in thicknesses from 0.001" to 0.050" (0.0254 mm to 1.27 mm) in widths up to 15.0" (381 mm). The material conforms to ASTM A240 and UNS S43600.



## Technical Data

TYPICAL MECHANICAL PROPERTIES <sup>1</sup>		
	ANNEALED	COLD ROLLED
Ultimate Tensile Strength	75,000 PSI	145,000 PSI
Yield Strength (0.2% Offset)	45,000 PSI	135,000 PSI
Elongation in 2" *	30%	1%
Modulus of Elasticity (Tension)	29 X 10 <sup>6</sup> PSI	-

\*The measured elongation will be less as thickness decreases to 0.004" and less.

<sup>1</sup> These values may be adjusted by control of process variables – consult HPM for desired values.

PHYSICAL PROPERTIES <sup>2</sup>	
Density	0.28 lbs./cu.in.
Melting Point (Approx.)	1425°C
Electrical Resistivity @ R.T.	67 Microhm · cm
Thermal Expansion Coefficient (0° to 100°C)	9.3 x 10 <sup>-6</sup> /°C
Thermal Conductivity @ 100°C	21 W/m · K
Magnetic Permeability	400 - 700
Magnetic Attraction	Yes

<sup>2</sup> Typical values to guide alloy selection but are not a guarantee of minimum or maximum.

NOMINAL COMPOSITION	
Chromium	17.3%
Manganese	0.30%
Silicon	0.30%
Nickel	0.30%
Carbon	0.01%
Titanium	0.30%
Molybdenum	1.0%
Iron	Balance