

HM Wire International, Inc.

Ph: 330-244-8501 Fax: 330-244-8561

www.litz-wire.com info@litz-wire.com www.hmwire.com

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Alloy 430 - Stainless Steel Alloy

Description: SS 430 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.

General Information: The alloy can be readily blanked and formed. The material can be resistance welded, brazed, and soldered. SS 430 is resistant to atmospheric corrosion and fresh water, but it not resistant to most salts and sea water. It is resistant to scaling by oxidation up to about 1400°F.

Chemical Composition

Nominal Composition	C %	Si %	Mn %	Cr %	Ni %	Fe %
	0.04%	0.40%	0.45%	16.30%	0.20%	Bal.

Typical Mechanical Properties¹

	Annealed	Cold Rolled
Ultimate Tensile Strength	75,000 PSI	145,000 PSI
Yield Strength (.2% Offset)	45,000 PSI	135,000 PSI
Elongation in 2" *	30%	1%
Modulus of Elasticity	29 x 10 ¹⁰ PSI	-
Poisson's Ratio	0.27	-

* The measured elongation will be less as thickness decreases to .002" and less.

Physical Properties²

Density	0.28 lbs/cu.in.
Melting Point (approx)	1425°C
Electrical Resistivity @ R.T.	60 Michrohms·cm
Thermal Expansion Coefficient (0° too 100°C)	10.5 x 10 ⁻⁶ /°C
Thermal Conductivity @ 100°C	26.1 W/m·K
Magnetic Permeability	800
Magnetic Attraction	Yes

¹These values may be adjusted by control of process variables.

²Typical values to guide alloy section, but not a guarantee of min or max.

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