



430li Stainless Steel, UNS 43000

Shaped, Flat, Square, Round, Fine Wire, Plated and Bare Wire
AMS 5503, AMS 5627, ASTM A-240, ASTM A-479, ASTM A-493, ASTM 580

430li Alloy Description

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Alloy 430Li is a low interstitial ferritic stainless steel similar to alloy 430. It is non-hardenable by heat treatment, magnetic and can be readily drawn and formed. Its drawing characteristics are similar to those of low carbon steel, although it is stronger in the annealed condition and will require stronger tooling and increased power. It is also adaptable to most hot-forming operations.

Applications

Interior architectural screens

Cooking utensils

Fasteners

Food processing

Interior trim applications

Appliances

Chemistry Typical

Carbon: 0.12 max

Manganese: 1.00 max

Silicon: 1.00 max

Chromium: 16.00 – 18.00

Nickel: 0.50 max

Molybdenum: 0.50 max

Phosphorus: 0.040 max

Sulfur: 0.030 max

Copper: 0.50 max

Iron: Balance

Physical Properties

Density, 0.280lbs/in³, 7.74 g/cm³

Electrical Resistivity, microhm-in (microhm-cm):

68°F (20°C): 23.68 (60)

Specific Heat, BTU/lb/°F (kJ/kg•K):

32-212°F (0-100°C): 0.11 (0.46)

Thermal Conductivity, BTU/hr/ft²/ft/°F (W/m•K):

At 212°F (100°C): 15.1 (26.1)

At 932°F (500°C): 15.2 (26.3)

Mean Coefficient of Thermal Expansion, in/in/°F (μm/m•K):

32-212°F (0-100°C): 5.8×10^{-6} (10.4)

32-1000°F (0-538°C): 6.3×10^{-6} (11.4)

Modulus of Elasticity, KSI (MPa)

29.0×10^3 (200×10^3) in tension

Magnetic Permeability: Magnetic

Melting Range, °F (°C) 2600-2750 (1427-1510)

Mechanical Properties at Room Temperature

Annealed: Typical

Ultimate Tensile Strength: 65 KSI min (450 MPa min)

Yield Strength (0.2% offset): 30 KSI min (205 MPa min)

Elongation: 22% min

Hardness: Rb 89 max

Properties Tempered

Alloy 430Li can be cold rolled to achieve the temper properties required by specific customers and/or manufacturing requirements. Contact Ulbrich Wire for details.

Additional Properties

Corrosion Resistance

Refer to NACE (National Association of Corrosion Engineers) for recommendations

Standard Wire Finishes

Extra Clean: Extra clean is also referred to as “bright annealed” or “bright annealed and cold rolled”

Grease (round wire only): Drawn in a heavy grease produces an “Ultra bright” finish for decorative applications

Soap (round wire only): Soap is used as a lubricant in the drawing process and is not removed. It acts as a lubricant during customer part forming operation. A soap finish is available in tempered products.

Plated: Many plating options are available.

*Special finishes are available: Contact Ulbrich Wire Sales with special finish and plating requests.

Forms

Continuous Coils

Cut to lengths

Precision cutting

Heat Treatment

Alloy 430Li it is non-hardenable by heat treatment.

Welding

For best results refer to: SSINA’s “Welding of Stainless Steels and Other Joining Methods”

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