

Material Designation	
EN	no EN standard
UNS*	no UNS standard

\*Unified Numbering System (USA)

Chemical Composition (Reference)	
Ni	9 %
Sn	6 %
Cu	balance

Typical Applications
<ul style="list-style-type: none"> <li>• Switches and relays</li> <li>• Micro motors</li> <li>• Grounding spring contacts</li> <li>• Mobile phone connectors</li> <li>• Spectacles</li> <li>• Sunglasses</li> <li>• Optical components</li> </ul>

Physical Properties*		
Electrical Conductivity	MS/m % IACS	6.5 11
Thermal Conductivity	W/ (m·K)	54
Coefficient of Electrical Resistance**	10 <sup>-3</sup> /K	0.4
Coefficient of Thermal Expansion**	10 <sup>-6</sup> /K	17.3
Density	g/cm <sup>3</sup>	8.89
Modulus of Elasticity	GPa	130
Specific Heat	J/(g·K)	0.381
Poisson's Ratio		0.34

\* Reference values at room temperature

\*\* Between 0 and 300 °C

Fabrication Properties	
Capacity for Being Cold Worked	excellent
Machinability	less suitable
Capacity for Being Electroplated	excellent
Capacity for Being Hot-Dip Tinned	excellent
Soft Soldering	excellent
Resistance Welding	good
Gas Shielded Arc Welding	good
Laser Welding	good

Corrosion Resistance
Wieland-L96 has good corrosion resistance in natural atmosphere. It is insensitive to stress corrosion cracking.

Mechanical Properties – Non Mill Age Hardened							
Temper		TB00*	TH00**	TD02*	TH02**	TD04*	TH04**
Tensile Strength R <sub>m</sub>	MPa	420–520	≥ 750	600–700	≥ 880	675–775	≥ 930
Yield Strength R <sub>p0.2</sub>	MPa	≥ 180	≥ 700	≥ 550	≥ 800	≥ 600	≥ 900
Elongation A <sub>50mm</sub>	%	≥ 25	≥ 10	≥ 7	≥ 5	≥ 1	≥ 1
Hardness HV (for information)		(95–130)	(260–330)	(180–230)	(280–340)	(210–240)	(300–350)

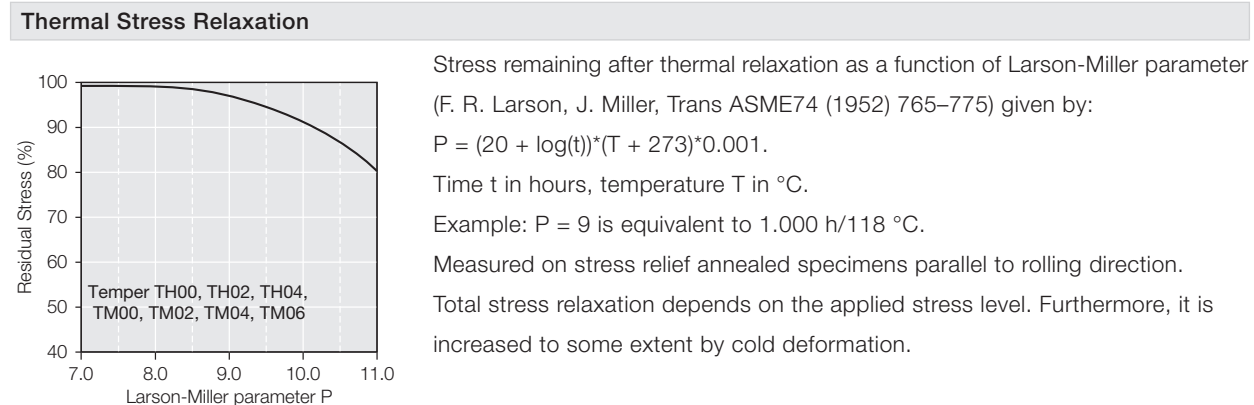
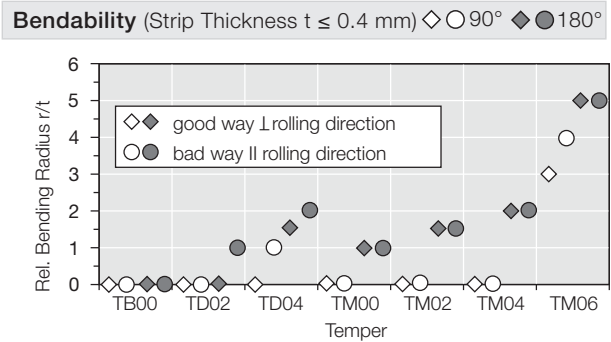
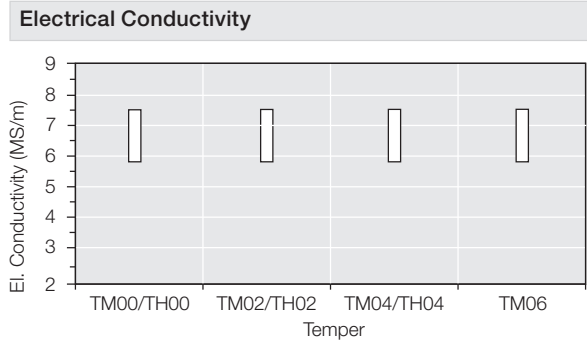
\* As delivered condition, prior to heat treatment

\*\* Properties expected after heat treatment (for information only). Heat treatment conditions will be advised by Wieland to meet your requirements.

Mechanical Properties – Mill Age Hardened					
Temper		TM00	TM02	TM04	TM06
Tensile Strength R <sub>m</sub>	MPa	600–840	800–900	850–950	≥ 900
Yield Strength R <sub>p0.2</sub>	MPa	≥ 500	≥ 750	≥ 800	≥ 850
Elongation A <sub>50mm</sub>	%	≥ 15	≥ 10	≥ 5	≥ 5
Hardness HV (for information)		(200–300)	(260–300)	(280–330)	(≥ 310)

# WIELAND-L96

CuNi9Sn6



### Fatigue Strength

The fatigue strength is defined as the maximum bending stress amplitude which a material withstands for  $10^7$  load cycles under symmetrical alternate load without breaking. It is dependent on the temper tested and is about  $\frac{1}{3}$  of the tensile strength  $R_m$ .

- ### Types and Formats available
- Standard coils with outside diameters up to 1000 mm
  - Traverse-wound coils with drum weights up to 1.5 t
  - Multicoil up to 5 t
  - Contour-milled strip
  - Sheet

- ### Dimensions available
- Strip thickness from 0.08 mm, thinner gauges on request
  - Strip width from 3 mm, however min. 10 x strip thickness

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