

Material Designation	
EN	CuZn0.5
UNS*	no UNS standard

\* Unified Numbering System (USA)

Chemical Composition (Reference)	
Zn	0.7 %
Cu	balance

Typical Applications
• Metal goods
• Apparatus industry
• Construction industry

Physical Properties*		
Electrical Conductivity	MS/m	48
	%IACS	83
Thermal Conductivity	W/(m·K)	350
Coefficient of Electrical Resistance**	10 <sup>-3</sup> /K	3.2
Coefficient of Thermal Expansion**	10 <sup>-6</sup> /K	17.7
Density	g/cm <sup>3</sup>	8.90
Modulus of Elasticity	GPa	127
Specific Heat	J/(g·K)	0.386
Poisson's Ratio		0.34

\* Reference values at room temperature

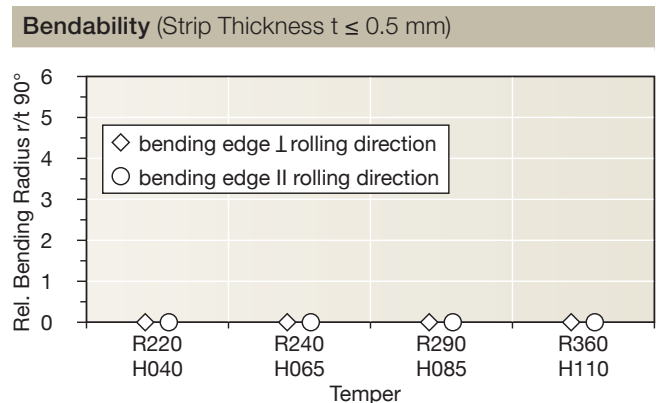
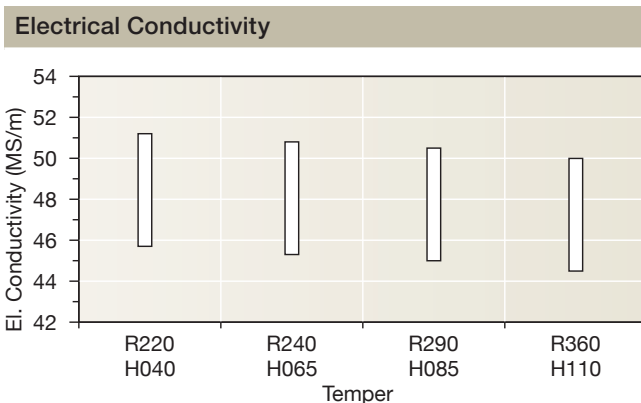
\*\* Between 0 and 300 °C

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

Corrosion Resistance
Resistant to: industrial atmosphere (formation of dark or green protective layers), industrial and drinking water (max. flow rate approx. 1.5 to 2 m/s), pure water vapour and neutral saline solutions.
Not resistant to: oxidizing acids, hydrous ammonia and halogenated gases, hydrogen sulfide and cyanide-containing compounds.

Mechanical Properties					
Temper		R220	R240	R290	R360
Tensile Strength R <sub>m</sub>	MPa	220–260	240–300	290–360	≥ 360
Yield Strength R <sub>p0.2</sub>	MPa	≤ 140	≥ 180	≥ 250	≥ 320
Elongation A <sub>50mm</sub>	%	≥ 33	≥ 8	–	–

Temper	H040	H065	H085	H110
Hardness HV	40–65	65–95	85–115	≥ 110



# Wieland-K42<sup>®</sup>

CuZn0,5

## Types and Formats Available

- Standard coils with outside diameters up to 1400 mm
- Traverse-wound coils with drum weights up to 1.5 t
- Hot-dip tinned strip
- Contour-milled strip

## Dimensions Available

- Strip thickness from 0.10 mm, thinner gauges on request
- Strip width from 3 mm, however min. 10 x strip thickness