

Rolled Products

AERIS 1130 (E-Cu58)



Material Designation		Chemical Composition (Reference)		Typical Application
EN	Cu-ETP	Cu	≥99.90%	- Main material for general electrical applications - Stamped parts - Transformer coils - Cable strip - Heat Sinks
UNS*	M1	O	0.005-0.004%	

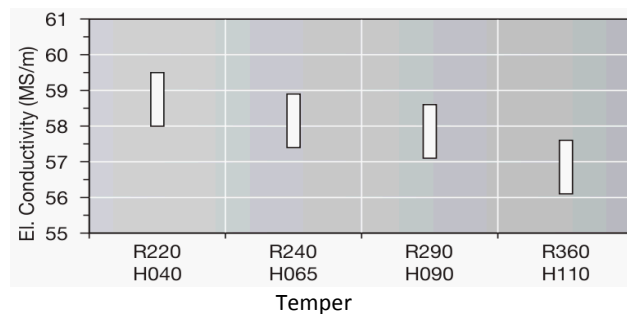
*no analogue

Physical Properties*			Fabrication Properties		Corrosion Resistance
Electrical Conductivity	MCM/M % IACS	58.0 100	Capacity for Being Cold Worked	excellent	Resistant to: industrial atmosphere (formation of dark/green protective layers), industrial and drinking water (max. flow rate approx. 1.5 to 2 m/s), pure water vapour, non oxidizing acids, alkalis (except for ammonia and cyanide-containing compounds), neutral saline solutions. Not resistant to: oxidizing acids, hydrous ammonia and halogenated gases, hydrogen sulfide, seawater, especially with high flow rates.
Thermal Conductivity	W/(m·K)	390	Machinability	Less suitable	
Coefficient of Electrical Resistance**	10 ⁻³ /K	3.7	Capacity for Being Electroplated	excellent	
Coefficient of Thermal Expansion**	10 ⁻⁶ /K	17.7	Capacity for Being Hot-Dip Tinned	excellent	
Density	g/cm ³	8.94	Soft Soldering	excellent	
Modulus of Elasticity	GPa	127	Resistance Welding	Less suitable	
Specific Heat	J/(g·K)	0.386	Gas Shielded Arc Welding	Less suitable	
* Reference values at room temperature			Laser Welding	Less suitable	
** Between 0 and 300°C					
*** Minimum value in soft temper					

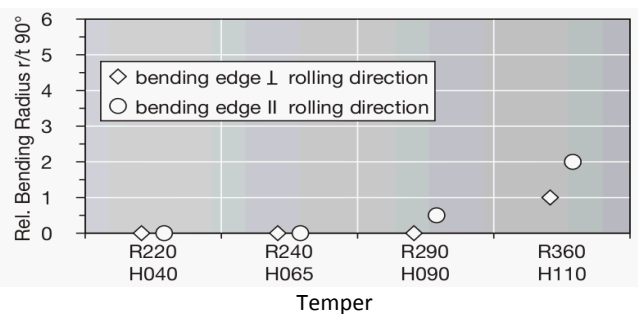
Mechanical Properties					
Temper		R220	R240	R290	R360
Tensile Strength, Rm	MPa	220-260	240-300	290-360	≥360
Yield Strength, Rp _{0.2}	MPa	≤140	≥180	≥250	≥320
Elongation, A _{50mm}	%	≥33	≥8	≥4	≥2

Temper		H040	H065	H090	H110
Hardness HV		45-65	65-95	90-110	≥110

Electrical Conductivity



Bendability (Strip Thickness t ≤ 0.5 mm)



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 for tempers R220, R240, R290
- 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