

Material Designation	
EN	CuZn30
UNS*	C26000

* Unified Numbering System (USA)

Chemical Composition (Reference)	
Cu	70 %
Zn	balance

Typical Applications

- Jewellery and metal goods
- Deep drawn parts
- Components for the electrical industry
- Stamped parts
- Connectors

Physical Properties*		
Electrical Conductivity	MS/m	16
	%IACS	28
Thermal Conductivity	W/(m·K)	126
Coefficient of Electrical Resistance**	10 ⁻³ /K	1.5
Coefficient of Thermal Expansion**	10 ⁻⁶ /K	19.7
Density	g/cm ³	8.55
Modulus of Elasticity	GPa	114
Specific Heat	J/(g·K)	0.377
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	fair
Laser Welding	fair

Corrosion Resistance

Good resistance to: fresh water, neutral or alkaline solutions, organic compounds as well as land, sea, and industrial atmosphere.

Not resistant to: acids, hydrous sulphur compounds, hydrous ammonia (stress corrosion cracking) in non-stress-relieved condition.

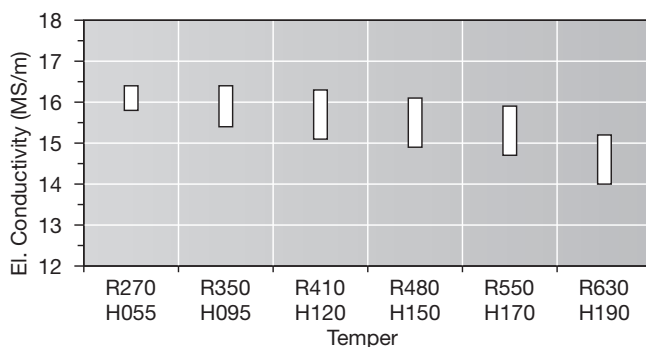
Mechanical Properties

Temper		R270	R350	R410	R480	R550	R630
Tensile Strength R _m	MPa	270–350	350–430	410–490	480–560	550–640	≥ 630
Yield Strength R _{p0.2}	MPa	≤ 160	≥ 170	≥ 260	≥ 430	≥ 500	–
Elongation A _{50mm}	%	≥ 40	≥ 21	≥ 9	≥ 4	–	–

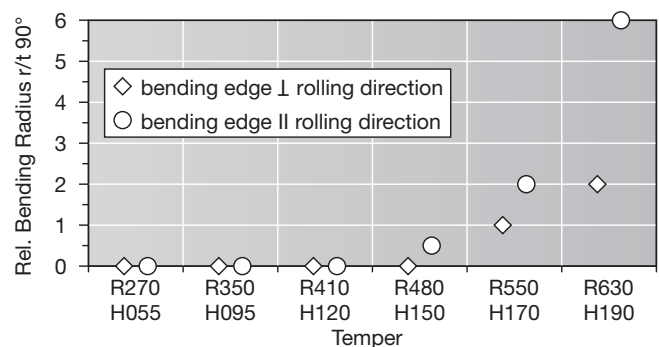
Temper		H055	H095	H120	H150	H170	H190
Hardness HV		55–90	95–125	120–155	150–180	170–200	≥ 190

Temper		G010	G020	G030	G050	G075
Grain Size	mm	≤ 0.015	0.015–0.030	0.020–0.040	0.035–0.070	0.050–0.100
Hardness HV		≤ 120	≤ 95	≤ 90	≤ 80	≤ 70

Electrical Conductivity



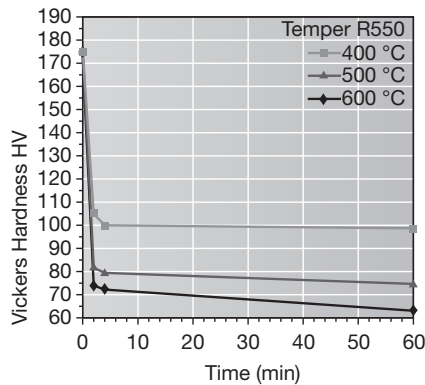
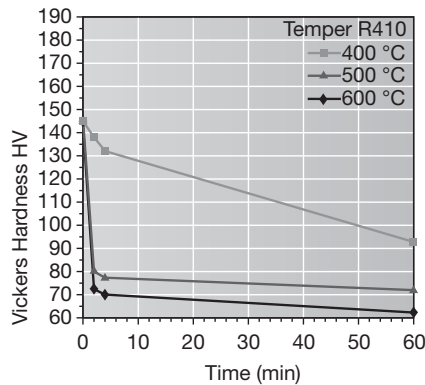
Bendability (Strip Thickness t ≤ 0.5 mm)



Wieland-M30

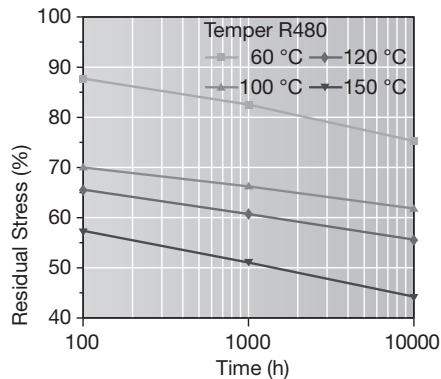
CuZn30
C26000

Resistance to Softening



Vickers hardness
after heat treatment
(typical values)

Stress Relaxation



Stress remaining as a function
of service temperature and time.
Measured on rolled-to-temper
specimens parallel to rolling direction.
Values extrapolated according to
F. R. Larson, J. Miller, Trans ASME74
(1952) 765-775.
Total stress relaxation depends on
the applied stress level.

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 1400 mm
- Traverse-wound coils with drum weights up to 1.5 t
- Multicoil up to 5 t
- Hot-dip tinned strip
- Contour-milled strip
- Sheet
- Strip and sheet with protective coating

Dimensions Available

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

Wieland (South Africa) (Pty.) Ltd.

www.wielandsa.com

PO Box 1048 Bedfordview 2008, South Africa, Phone +27 11 609-8325/48, Fax +27 11 452-3791, info@wielandsa.com

This leaflet is for your general information only and is not subject to revision. No claims can be derived from it unless there is evidence of intent or gross negligence. The data given are no warranty that the product is of a specified quality and they cannot replace expert advice or the customer's own tests.