

Major changes start at the beginning:  
Sundwiger ECO-SILVER 17 is the green starting point for the protection of our environment.

Carbon FoodPrint:  
With the Recycling Input Rate of 97% the Primary Energy Consumption can be reduced by more than 40%. Concurrently, the Global Warming Potential is shortened by more than 50% (= net savings of more than 2.0 CO<sub>2</sub>-Emission equivalents per kg)

## Material Designation

DIN-EN Symbol	CuNi18Zn27
DIN-EN	CW410J
UNS	C 77000
JIS	C7701

## Nominal Composition (mass content in %)

Cu	Balance
Ni	18
Zn	27
Fe	< 0.2
Mn	< 0.25
Sn	< 0.03
Pb	< 0.005
Cd	< 0.002
Other	< 0.08

## Typical Applications

- Coins, caps for quartz crystals
- Electromagnetic shieldings
- Deep drawing parts
- Tableware, security keys, cutlery
- Contact springs, connector, leaf springs for relays, electric contacts

## About The Alloy

Sundwiger ECO-SILVER 17 has been developed in response to the demand of numerous customers for an environmentally sound alternative alloy to C7001.

Having a significant positive impact on the environment by reducing the carbon footprint, this material has also a guaranteed and certified RIR potential of at least 97%. The RIR (Recycling Input Rate) is measured according to the environmental standard, which excludes primary metals and home scrap.

Sundwiger ECO-SILVER 17 has good cold-forming properties, is tarnish resistant and has particularly good spring properties. Like all copper alloys the copper-nickel-zinc alloys are not susceptible to embrittlement at lower temperature. The corrosion resistance of nickel silver is considerably better than that of binary copper-zinc alloys. Sundwiger ECO-SILVER 17 is insensitive to stress corrosion cracking.

## Physical Properties\*

Electrical conductivity soft	3	MS/m
Thermal conductivity	27	W/(m·K)
Thermal expansion coefficient **	17	10 <sup>-6</sup> /K
Density	8.8	g/cm <sup>3</sup>
Modulus of elasticity	135	GPa = kN/mm <sup>2</sup>

\* Reference values

\*\* Between 20 and 300 °C

## Mechanical Properties \*)

Temper condition	H01 R 480 H 120	H02 R 540 H 150	H04 R 630 H 180	H06 R 700 H 210
Tensile strength in N/mm <sup>2</sup>	480 - 600	540 - 655	630 - 735	700 - 820
0.2% yield strength in N/mm <sup>2</sup>	280	450	500	560
Elongation A <sub>L50</sub> %	> 25	> 8	> 4	> 2
Vickers hardness HV	120 - 160	150 - 210	180 - 240	210 - 260
Electrical conductivity in % IACS	4	4	4	4
Minimum radius of the bending mandrel for 90° bend and strip thickness s				
0.10 ≤ s ≤ 0.25 mm	transverse	0 x s	0 x	0 x s
	parallel	0 x s	0 x s	1 x s
0.25 < s ≤ 1.0 mm	transverse	0 x s	0 x s	2 x s
	parallel	0 x s	0 x s	5 x s

\*) Reference values

## Processing Instructions

Cold forming properties	Machinability	Electroplating properties	Hot-dip tinning properties	Soldering	Resistance welding	Gas shielded arc welding	Laser welding
very good	satisfactory	very good	good	good	very good	good	good

## Available Dimensions

Bright pre-rolled strips 1 to 2.5 mm

Precision strip thickness from 0.05 to 1.2 mm

Strip width from 3.0 to 600 mm, but at least 10 times of the strip thickness

Other widths available on request.

## Available Versions

Coils with standard outer diameters of 1200 mm

Strips in reel form with coil weight of up to 1500 kg

Multipancake up to 2.5 t

Hot-dip tinned strips

Profiled strips

Electroplated strips (tin, nickel)

## Your Local Contact Person

Europe

Asia

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