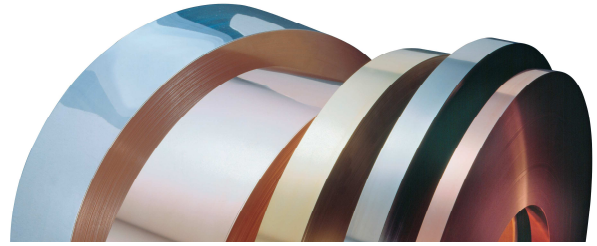


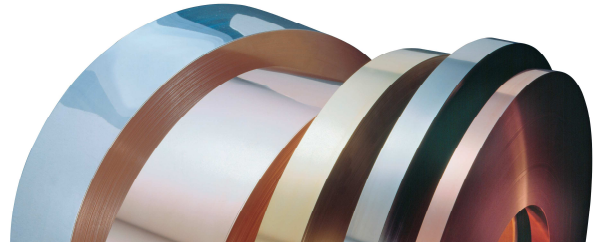
Nickel Silver NB18



Material Designation		Nominal Composition (mass content in %)		About The Alloy
DIN-EN Symbol	CuNi18Zn20	Cu	Balance	
DIN-EN	CW409J	Ni	18	
UNS	≈ C 76400	Zn	20	
JIS	C7521	Fe	< 0.2	
		Mn	< 0.5	
		Pb	< 0.01	
		Other	< 0.2	
Physical Properties		Typical Applications		
Electrical conductivity soft	3 MS/m	<ul style="list-style-type: none"> • Coins • Caps for quartz crystals • Electromagnetic shieldings • Deep drawing parts • Tableware • Security keys • Cutlery • Contact springs • Connector • Leaf springs for relays • Electric contacts 		
Thermal conductivity	27 W/(m·K)			
Thermal expansion coefficient **	17 10 ⁻⁶ /K			
Density	8.7 g/cm ³			
Modulus of elasticity	135 GPa = kN/mm ²			
* Reference values at room temperature				
** Between 20 and 300 °C				

Mechanical Properties *)						
Temper condition		O R 370 H 85	H02 R 450 H 115	H04 R 500 H 160	H06 R 580 H 180	H08 R 640 H 200
Tensile strength in N/mm ²		370 - 460	450 - 520	500 - 590	580 - 680	640 - 730
0.2 % yield Strength in N/mm ²		< 250	250	410	510	600
Elongation A _{LS0} %		> 30	> 9	> 3	> 2	-
Vickers hardness HV		85 - 125	115 - 160	160 - 190	180 - 210	200 - 230
Electrical conductivity in % IACS		5	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 s	0 x s	0 x s	0 x s
	parallel	0 x s	0 x s	0 x s	0 x s	0 x s
0.25 < s ≤ 1.0 mm	transverse	0 x s	0 x s	0 x s	0 x s	-
	parallel	0 x s	0 x s	0 x s	1 x s	-
*) Reference values						

Nickel Silver NB18



Processing Instructions	
Cold forming properties	very good
Machinability	satisfactory
Electroplating properties	very good
Hot-dip tinning properties	satisfactory
Soldering	satisfactory
Resistance welding	very good
Gas shielded arc welding	good
Laser welding	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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We reserve the right to make alterations especially where necessitated by technical developments or changes in availability. Please ask for the latest edition of this material data sheet.