

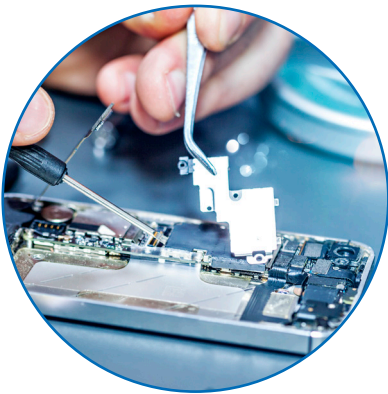
# HIGH PERFORMANCE COPPER ALLOYS

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# APPLICATIONS



ALLOY GROUP	KEY ATTRIBUTES	APPLICATIONS
Current sensing	Precision and stability	Battery management (automotive), electricity meters
CuNiSn alloys	Hardness and elasticity	Automotive relay switches, bushings and bearings
Nickel alloys	Resistance to chlorine corrosion	Battery pack, chlorine electrolyser
Spinodal CuNiSn	High strength and hardness	Eye frames, automotive bushings, electronic EMI shielding, miniature connectors
Nickel-silver	Formability for deep drawing and solderability	Connectors, electromagnetic shielding, springs, eyewear, bearings, thermostats, pressure switches, catenaries, musical instruments, watch making and clocks
Alloy 400	Resistance to chlorine corrosion and high temperatures	Chlorine valves, oil and gas heaters
Resistance alloys	Precise electrical properties	Low voltage circuit breakers, automotive electronic heating devices



# ALLOY PORTFOLIO



	CHEMICAL COMPOSITION	ALLOY NAMES	INTERNATIONAL DESIGNATION			BAR	WIRE	STRIP	SHEET
			UNS	DIN	BS				
DOPED COPPER GRADES	CuCoP	CUPROFOR	C15600					■	
	CuNi9Sn2	NICLAL 725	C7250	2.0875			■	■	■
	CuNi2.5Si	SICLANIC S		2.0855		■	■	■	■
	CuNi3Si	C 7025						■	■
	CuNi9Sn5	NICLAFOR 1000				■	■	■	■
	CuNi7.5Sn5Te	DECLAFOR 1015	C72700			■	■		
NICKEL SILVER	CuNi3Zn35/CuNi2Zn20	NICLAL 103				■	■	■	■
	CuNi10Zn27	NICLAL 101	C74500		NS103	■	■	■	■
	CuNi12Zn24	NICLAL 120	C75700	2.0730	NS104	■	■	■	■
	CuNi15Zn22	NICLAL 150			NS105	■	■	■	■
	CuNi18Zn20	NICLAL 180	C75900	2.0740	NS106	■	■	■	■
	CuNi18Zn27	NICLAL 181	C77000	2.0742	NS107	■	■	■	■
	CuNi25Zn10	NICLAL 250				■	■	■	■
	CuNi25Zn20	NICLAL 260				■	■	■	■
ARCAP	AP1D	AP1D	C76390			■	■		
	AP1	AP1				■	■	■	■
	AP1C	AP1C				■	■	■	■
	AP4	AP4				■	■	■	■
COPPER NICKEL ALLOYS	CuNi2	NICLAL 02		2.0802		■	■	■	■
	CuNi5	NICLAL 05		2.0807		■	■	■	■
	CuNi6	NICLAL 06				■	■	■	■
	CuNi8	NICLAL 08				■	■	■	■
	CuNi10	NICLAL 10	C70700	2.0811		■	■	■	■
	CuNi13	NICLAL 13				■	■	■	■
	CuNi15	NICLAL 15				■	■	■	■
	CuNi20	NICLAL 20			CN104	■	■	■	■
	CuNi23Mn	NICLAL 23		2.0881		■	■	■	■
	CuNi25	NICLAL 25	C71300	2.0830	CN105	■	■	■	■
	CuNi30	NICLAL 30	C71580	2.0890		■	■	■	■
	CuNi10Fe1Mn	NICLAL 10 FE	C70600	2.0872	CN102	■	■	■	■
	CuNi30Mn1Fe	NICLAL 30 FE	C71500	2.0882	CN107	■	■	■	■
	CuNi44Mn1	CONSTANTAN 45		2.0842		■	■	■	■
	CuNi30MnFeTi	NICLAL 30 TI				■	■	■	■
OHM ALLOYS	CuMn10Ni4	NICLAL 38				■	■	■	■
	CuMn11Ni4	NICLAL 42		2.1362		■	■	■	■
	CuMn13Ni4	NICLAL 48				■	■	■	■
CU-NI	NiCu30Fe	NICLAL 400	N04400	2.4360		■	■	■	■
	NiCu54	NICLAL 404				■	■	■	■
PURE NICKEL	LC 99.0%	NICKEL 201	N02201	2.4068		■	■	■	■
	Ni 99.2%	NICKEL 200	N02200	2.4066		■	■	■	■
	Ni 99.6%	NICKEL 206		2.4060		■	■	■	■
	LC Ni 99.6	NICKEL 206 BC		2.4061		■	■	■	■
	NiMn2	NICKEL 204		2.4110			■	■	

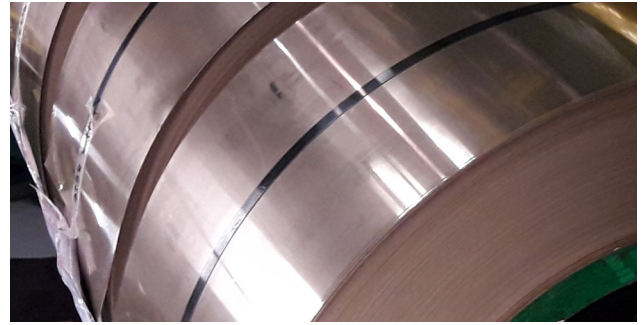
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# PRODUCT PORTFOLIO AND TOLERANCES



## Strip thickness from 0,05 to 3,5 mm

Thickness range (mm)	Thickness tolerance (mm)
$0.05 \leq \text{thick} < 0.40$	$\pm 0.005$
$0.40 \leq \text{thick} < 1.00$	$\pm 0.008$
$1.00 \leq \text{thick} < 2.00$	$\pm 0.015$
$2.00 \leq \text{thick} < 3.50$	$\pm 1\%$ of thickness

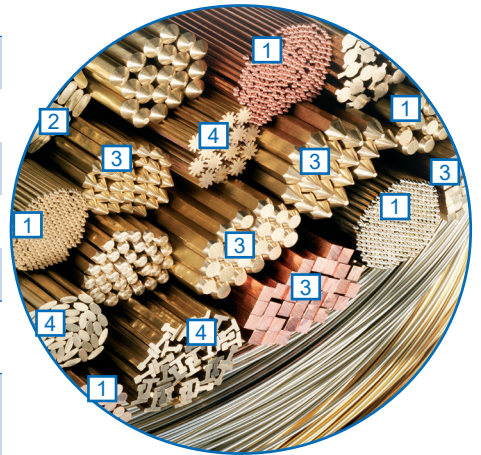


## Strip width from 4 to 380 mm

Thickness range (mm)	Width range (mm)			
	$4 \leq \text{width} < 10$	$10 \leq \text{width} < 55$	$55 \leq \text{width} < 120$	$120 \leq \text{width} < 380$
$0.05 \leq \text{thick} < 0.40$	- 0 / + 0.10	- 0 / + 0.10	- 0 / + 0.20	- 0 / + 0.30
$0.40 \leq \text{thick} < 1.00$	- 0 / + 0.15	- 0 / + 0.15	- 0 / + 0.20	- 0 / + 0.30
$1.00 \leq \text{thick} < 2.00$	- 0 / + 0.15	- 0 / + 0.30	- 0 / + 0.40	- 0 / + 0.50
$2.00 \leq \text{thick} < 3.50$	- 0 / + 0.30	- 0 / + 0.60	- 0 / + 0.60	- 0 / + 0.70

## Precision products portfolio and tolerances

	Tolerances		
	Size range (mm)	h9 (standard)	h8
Round (1)	1.1 - 3.0	+0 / -0.025	+0 / -0.014
	3.1 - 6.0	+0 / -0.030	+0 / -0.018
	6.0 - 10.0	+0 / -0.036	+0 / -0.022
	10.1 - 18.0	+0 / -0.043	+0 / -0.027
Flat (2)	Tolerances according to drawing		
Square, Hexagonal, Octagonal (3)	Standard tolerances h9 and h8		
Profile (4)	Special drawing from client with dimensions and tolerances. Range of geometries available		



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