

Nickel Silver



CuNi10Zn27 / CW401J / C74500

Version 3

Reference standard: EN 12166

Symbol	Number	Element	Cu	Fe	Mn	Ni	Pb	Sn	Zn	Bal.	Density g/cm ³
CuNi10Zn27	CW401J	Min %	61.0	-	-	9.0	-	-	Rem	-	8.6
		Max %	64.0	0.3	0.5	11.0	0.05	-	-	0.2	

Nickel silver (also known as Alpaca) contains copper, nickel and zinc and is a bright silver colour in appearance. Nickel Silver wire is manufactured in flat, round and square sections in a full range of sizes and tempers to meet customer requirements.

Typical Tensile Strength N/mm ²					
Size Range	Soft	¼ Hard	½ Hard	Hard	Spring Hard
0.1-0.5mm	430-530	520-620	620-730	730-850	850min
0.5-1.5mm	400-510	480-580	580-680	680-800	800min
1.5-4.0mm	370-480	460-560	560-660	660-780	780min
4.0-8.0mm	-	-	530-630	630-750	-
4.0-20.0mm	360-480	440-540	-	-	-

Physical Properties:

- Resistivity: 0.20 ($\Omega \times \text{mm}^2/\text{m}$)
- Melting Point: 1000 - 1040 °C
- Elongation at soft temper: >25%

Tolerances:

<0.25mm	±0.005mm
0.25-0.50mm	±0.008mm
0.50-1.00mm	±0.012mm
1.00-2.00mm	±0.02mm
2.00-4.00mm	±0.03mm

Typical applications:

- Brush wire
- Resistance wire



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