

Nickel Silver



CuNi18Zn20/ CW409J / C76400 / NS106

Version 2

Reference standard: EN 12166

Symbol	Number	Element	Cu	Fe	Mn	Ni	Pb	Sn	Zn	Bal.	Density g/cm ³
CuNi18Zn20	CW409J	Min %	60.0	-	-	17.0	-	-	Rem	-	8.7
		Max %	63.0	0.3	0.5	19.0	0.03	0.03	-	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	450-560	550-650	640-750	750-880	880min
0.5-1.5mm	430-550	530-630	620-720	720-830	830min
1.5-4.0mm	420-540	510-610	600-700	700-800	800min
4.0-8.0mm	-	-	570-670	660-770	-
4.0-20.0mm	410-530	490-590	-	-	-

Physical Properties:

- Resistivity: 0.30 ($\Omega \times \text{mm}^2/\text{m}$)
- Melting Point: 1060 - 1100°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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