

<b>Edition from</b>	<b>25.02.2022</b>	<b>Alloy data sheet</b>	<b>No. 670</b>
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<b>Alloy</b>	<b>ISO</b>	<b>EN</b>	<b>ASTM</b>
<b>N29</b>	<b>CuNi8Zn19Pb1</b>	<b>CW408J</b>	<b>C76300</b>

Others:

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**Main characteristics**

Free machining nickel silver with very high toughness and high corrosion resistance

**Chemical composition**

Cu	Zn	Ni	Pb
60,7 – 62,3	Remainder	17,2 – 18,4 %	0,8 - 1,3 %

Impurities  
Max.

Sn	Mn	Fe	Others
0,2 %	0,5 %	0,3 %	0,2 %

**Product portfolio**

Hot extruded and cold drawn products	
Section type	Round, square, hexagonal, flat
Rod	Available
Wire	Available
Profile	On demand

**Examples of use**

Ball point pen tips cold formed and machined, eyeglass components, screws.

**Mechanical properties**

	Form	Dimension Ø	Temper	UTS N/mm <sup>2</sup>	YS N/mm <sup>2</sup>	A %	Hardness HBW
Rod Wire		2,0 – 14,0 2,0 – 6,35	R420	>420	>260	20	----
			H110	----	---	---	110-145
			R520	> 520	> 420	6	---
			H130	---	---	---	130-155
			R650	> 650	> 580	---	---

*Other tempers on demand*

**Physical properties**

Density	kg/dm <sup>3</sup>	8,8
Melting range	°C	1060 – 1110
Linear expansion coefficient (20-200°C)		0,000017
Specific heat	J/kg K	420
Thermal conductivity at 20°C (68° F)	W/m · K	33
Electrical conductivity at 20° C (68° F)	% IACS	6
Elasticity modulus	kN/mm <sup>2</sup>	120

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<b>Workability</b>	Cold working, maximum section reduction		good
	Hot working		good
	Machining, compared with CuZn39Pb3 (100 %)	%	average, 55
	Annealing temperature range	°C	620 – 700
	Stress relieving temperature range	°C	300 – 350
	Soft soldering		good
	Hard soldering		fair
	Autogenous welding		fair
	Arc welding		fair
	Resistance welding		fair

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<b>Symbols</b>	Ø	= round rod diameter (mm)
	SW	= width across flats (hexagonal or square rods) (mm)
	UTS	= ultimate tensile strength
	YS	= yield stress at 0,2 %
	A	= tensile elongation

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