

Edition from	25.02.2022	Alloy data sheet	No. 662
---------------------	-------------------	-------------------------	----------------

Alloy	ISO	EN	ASTM
NM2	CuNi7Zn39Mn2Pb3	CW400J	-

Others:

- -

Main characteristics Nickel silver specially developed for free machining.

Chemical composition	Cu 48,5 – 49,7	Zn Remainder	Ni 6,9 - 7,6 %	Pb 2,4 - 3,0 %	Mn 2,1 – 2,8
Impurities Max.	Sn 0,2 %	Others 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 ²	YS N/mm ²	A %	Hardness HBW
			R500	>500	>350	12	----
			H125	----	---	---	125-165
	Rod	2,0 – 15,0	R600	> 600	> 400	5	---
	Wire	2,0 – 6,35	H155	---	---	---	155-190
		R700	> 700	> 500	---	---	

Other tempers on demand

Physical properties	Density	kg/dm ³	8,4
	Melting range	°C	910 – 925
	Linear expansion coefficient (20-200°C)		0,000019
	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	7
	Elasticity modulus / Shear modulus	kN/mm ²	115 / 42

Edition from	25.02.2022	Alloy data sheet	No. 662
---------------------	-------------------	-------------------------	----------------

Workability	Cold working, maximum section reduction	%	fair, 30
	Hot working		good
	Machining, compared with CuZn39Pb3 (100 %)	%	Excellent, 90
	Annealing temperature range	°C	600 – 700
	Stress relieving temperature range	°C	290 – 340
	Soft soldering		good
	Hard soldering		fair
	Autogenous welding		fair
	Arc welding		fair
Resistance welding		fair	

Symbols	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
