

Copper Alloys

CW614N (CZ121) Bar

 Datasheet Updated
05 December 2024

RANGE

Product Form	Imperial Sizes		Metric Sizes
	From	To	
Round Bar	1/8"	4 1/2"	3.0mm - 255.0mm
Hexagon Bar	0.248"	3"	5.0mm - 65.0mm
Square Bar	1/4"	3"	
Flat Bar	3/8" x 1/8"	4" x 2"	

SPECIFICATIONS

Commercial	CZ121
EN	CW614N

A free machining brass with the highest possible machinability rating.

CHEMICAL COMPOSITION

 EN 12164
CW614N Brass

Element	% Present
Copper (Cu)	57.00 - 59.00
Lead (Pb)	2.50 - 3.50
Aluminium (Al)	0.00 - 0.05
Iron (Fe)	0.00 - 0.30
Nickel (Ni)	0.00 - 0.30
Others (Total)	0.00 - 0.20
Tin (Sn)	0.00 - 0.30
Zinc (Zn)	Balance

ALLOY DESIGNATIONS

CZ121/CW614N corresponds to the following designations but may not be a direct equivalent:

- UNS C38500
- CuZn39Pb3

DISCLAIMER

This Data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon. Please note that the 'Datasheet Update' date shown above is no guarantee of accuracy or whether the datasheet is up to date.

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SUPPLIED FORMS

- Bar
- Hollow Bar

APPLICATIONS

- High speed machined components
- Architectural extrusions
- Locks
- Hinges
- Nuts, bolts, bushings & bearings
- Window frames

CHARACTERISTICS

- Highest machinability of any copper alloy
- Good corrosion resistance
- Good strength
- Excellent hot formability

MECHANICAL PROPERTIES

 EN 12164
Bar 6mm to 80mm Dia/5mm to 60mm AF

Property	Value
Proof Stress	230-350 MPa
Tensile Strength	360-500 MPa
Hardness Brinell	90 to 160 HB
Elongation A	20 to 5 %