

## Lead Brass

# bedra 38500

### Material Designation \*

UNS	C38500
EN	CuZn39Pb3 (CW614N)
JIS	C3604
GB	HPb58-3

### Chemical Composition

Cu	57.0-61.0	%
Pb	1.8-3.7	%
Fe	≤0.5	%
Fe+Sn	≤1.0	%
Zn	Balance	%



### Characteristics

It has high strength, corrosion resistance and abrasion resistance, good hot machining properties and weldability, but poor cold machining properties.

### Typical Applications

It is used for parts and components requiring precision machining, such as screws, nuts and rotations, shafts, gears, pneumatic tools/connectors, valves, lighters, camera components and watch components.

### Physical Properties

Density <sup>①</sup>	8.47	g/cm <sup>3</sup>
Electrical conductivity <sup>①</sup>	25	%IACS
Thermal conductivity <sup>①</sup>	120	W/( m·K)
Coefficient of thermal expansion <sup>②</sup>	20.1	10 <sup>-6</sup> /K
Modulus of elasticity	96.5	GPa

Note<sup>①</sup>: Temperature for testing is 20°C.

Note<sup>②</sup>: Temperature range for testing is 20-300°C.

### Fabrication Properties

Cold workability	Poor
Hot workability	Excellent
Brazing	Good
Resistance welding	Not recommended
Machinability compared with C36000	80%

# bedra 38500

## Mechanical Properties

Diameter	Temper	Tensile Strength	Hardness
mm		MPa min.	HV min.
1 ≤ Φ ≤ 110	F	335	80

## Tolerance and Delivery Form

Diameter	Tolerance <sup>③</sup>	Ovality	Straight Bar		Straightness
			Length		
mm	mm	mm	mm max.	ft max.	mm/m max.
2 ≤ Φ < 3	0.015	0.0075	2500	8.2	1.0
3 ≤ Φ < 6	0.02	0.01	2500	8.2	0.5
6 ≤ Φ < 10	0.03	0.015	4000	13.1	0.5
10 ≤ Φ < 18	0.04	0.02	4000	13.1	0.5
18 ≤ Φ < 25	0.06	0.03	4000	13.1	0.5
25 ≤ Φ < 40	0.10	0.05	4000	13.1	0.5
40 ≤ Φ < 60	0.15	0.075	4000	13.1	0.5
60 ≤ Φ < 80	0.30	0.15	3000	9.8	3.0
80 ≤ Φ < 100	0.16	0.40	2000	6.6	5.0
100 ≤ Φ ≤ 120	2.00	0.50	1500	4.9	6.0

Note<sup>③</sup>: The tolerances listed in the table are specified as all plus or all minus. When tolerances are specified as plus and minus (±), half the values given.

\*Composition JIS H3250-2015  
 Conductivity For reference only  
 Mechanical Properties JIS H3250-2015  
 Fabrication Properties For reference only  
 Other Physical Properties For reference only

The datasheet is for your general information only and is not subject to revision. No claim can be derived from it unless is evidence of intent or gross negligence. The data given is with reference to the relevant standards as ASTM, BS EN, JIS, RWMA, SAE and is for reference only, no warranty can be derived from the data provided. The given info may not replace the customers' own tests.