

## Brass

# bedra 27450

### Material Designation\*

UNS	C27450
EN*	CuZn37 (CW 508 L)*
JIS	C2801
GB	H62

\*Similar to CuZn37 (CW 508 L)

### Chemical Composition

Cu	60-65	%
Zn	Balance	%



### Characteristics

It has high zinc content and high strength, which is suitable for hot working, easy cutting, brazing and welding. It has high corrosion resistance, but fair machinability at cold working.

### Typical Applications

This is lead-free cutting alloy. It is widely used in hardware, machinery, electronics, valve body, bathroom and other industries. And it is suitable for all kinds of deep drawing and bending parts, such as pin, rivet, washer, screw nut, conduit, pressure gauge spring, screen, radiator parts, etc.

### Physical Properties

Density <sup>①</sup>	8.44	g/cm <sup>3</sup>
Electrical conductivity <sup>①</sup>	27	%IACS
Thermal conductivity <sup>①</sup>	114	W/(m·K)
Coefficient of thermal expansion <sup>②</sup>	19.7	10 <sup>-6</sup> /K
Modulus of elasticity	110	GPa

Note①: Temperature for testing is 20°C.

Note②: Temperature range for testing is 20-300°C.

### Fabrication Properties

Cold workability	Excellent
Hot workability	Excellent
Brazing	Excellent
Machinability compared with C36000	70%

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## Mechanical Properties

Diameter	Temper	Tensile Strength	Yield Strength	Elongation	Hardness
mm		MPa min.	MPa min.	% min.	HV min.
3 < $\Phi$ ≤ 12	H02	390	270	10	115
12 < $\Phi$ ≤ 18	H02	370	250	14	100
3 < $\Phi$ ≤ 12	H04	590	450	--	170
12 < $\Phi$ ≤ 18	H04	490	360	--	140

## Tolerance and Delivery Form

### Straight Bar

Diameter	Tolerance <sup>③</sup>	Ovality	Length	Straightness	
mm	mm	mm	mm max.	ft max.	mm/m max.
2 ≤ $\Phi$ < 3	0.03	0.0075	2500	8.2	1.0
3 ≤ $\Phi$ < 6	0.04	0.01	2500	8.2	0.5
6 ≤ $\Phi$ < 10	0.06	0.015	4000	13.1	0.5
10 ≤ $\Phi$ < 18	0.08	0.02	4000	13.1	0.5
18 ≤ $\Phi$ < 25	0.12	0.03	4000	13.1	0.5
25 ≤ $\Phi$ < 40	0.20	0.05	4000	13.1	0.5
40 ≤ $\Phi$ < 60	0.30	0.075	4000	13.1	0.5
60 ≤ $\Phi$ < 80	0.60	0.15	3000	9.8	3.0
80 ≤ $\Phi$ < 100	1.60	0.40	2000	6.6	5.0
100 ≤ $\Phi$ ≤ 120	2.00	0.50	1500	4.9	6.0

Note③: The tolerances listed in the table are specified as all plus or all minus. When tolerances are specified as plus and minus ( $\pm$ ), half the values given.

\*Composition UNS  
 Conductivity UNS  
 Mechanical Properties For reference only, measured at room temperature, 68°F(20°C).  
 Fabrication Properties UNS, Machinability for reference only.  
 Other Physical Properties For reference only

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