Lead Brass

bedra 36000

Material Designation*

UNS	C36000
EN	CuZn36Pb3 (CW 603 N)
JIS	C3601
GB	HPb62-3

Chemical Composition

Cu	60.0-63.0	%
Pb	2.5-3.0	%
Fe	≤0.35	%
Zn	Balance	%

Characteristics

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

Typical Applications

It is used for parts and components that need precision machining, such as clock structure and mechanical instrument, truck tractor parts.

Physical Properties

Density①	8.5	g/cm^3
Electrical conductivity①	26	%IACS
Thermal conductivity①	116	W/(m·K)
Coefficient of thermal expansion ②	19.7	10^{-6}/K
Modulus of elasticity	96.5	GPa

Fabrication Properties

Cold workability	Fair
Hot workability	Fair
Brazing	Good
Resistance welding	Not recommended
Machinability compared with C36000	100%

Note①: Temperature for testing is 20°C.
Note②: Temperature range for testing is 20-300°C.

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bedra
intelligent wires

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Mechanical Properties

Diameter	Temper	Tensile Strength	Yield Strength	Elongation	Hardness
mm		MPa min.	MPa min.	% min.	HRB
Φ≤25	O60	330	140	15	--
25<Φ≤50	O60	305	125	20	--
Φ>50	O60	275	105	25	--
Φ>12	O60	--	--	--	10-45
Φ≤12	H02	395	170	7	--
12<Φ≤25	H02	380	170	10	60-80
25<Φ≤50	H02	345	140	15	55-75
50<Φ≤100	H02	310	105	20	--
50<Φ≤75	H02	--	--	--	45-70
75<Φ≤100	H02	--	--	--	40-65
Φ>100	H02	275	105	20	≥25
1.6<Φ≤4	H04	550	310	--	--
4<Φ≤12	H04	480	240	4	--
12<Φ≤18	H04	450	205	6	--

Tolerance and Delivery Form

			Straight Bar		
Diameter	Tolerance③	Ovality	Length		Straightness
mm	mm	mm	mm max.	ft max.	mm/m max.
2≤Φ<3	0.03	0.0075	2500	8.2	1.0
3≤Φ<6	0.04	0.01	2500	8.2	0.5
6≤Φ<10	0.06	0.015	4000	13.1	0.5
10≤Φ<18	0.08	0.02	4000	13.1	0.5
18≤Φ<25	0.12	0.03	4000	13.1	0.5
25≤Φ<40	0.20	0.05	4000	13.1	0.5
40≤Φ<60	0.30	0.075	4000	13.1	0.5
60≤Φ<80	0.60	0.15	3000	9.8	3.0
80≤Φ<100	1.60	0.40	2000	6.6	5.0
100≤Φ≤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 (±), half the values given.

*Composition	UNS
Conductivity	UNS
Mechanical Properties	UNS
Fabrication Properties	CDA
Other Physical Properties	CDA