

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

Density ^①	8.5	g/cm ³
Electrical conductivity ^①	26	%IACS
Thermal conductivity ^①	116	W/(m·K)
Coefficient of thermal expansion ^②	19.7	10 ⁻⁶ /K
Modulus of elasticity	96.5	GPa

Note^①: Temperature for testing is 20°C.

Note^②: Temperature range for testing is 20-300°C.

Fabrication Properties

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

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Mechanical Properties

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

Tolerance and Delivery Form

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

Note^③: 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 UNS
 Fabrication Properties CDA
 Other Physical Properties CDA

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