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Ghoshouni Industrial Co.



Material Datasheet  
 $\text{CuZn38Pb2}$   
(CW608N)

## CuZn38Pb2

Alloy for both machining and hot stamping rods

CuZn38Pb2 alloy combines remarkably both machining and cold working properties, which makes it suitable for bending, riveting and upsetting. The free cutting properties inherent to this alloys are given by a lead content homogeneously dispersed through its microstructure. Furthermore, it also has good hot working properties, which makes it ideal for parts that need posterior machining operations.

### MATERIAL DESIGNATION

International	EN	UNS	JIS
CuZn38Pb2	CW608N	C37700	-

### Applications

forgings and pressings of all kinds

### REFERENCE CHEMICAL COMPOSITION IN %

material	Cu	Pb	Fe	Ni	Sn	Al	Zn	Other
min	60	1.6	0	0	0	0	Rem.	0
max	61	2.5	0.2	0.3	0.2	0.05	Rem.	0.2

### HEAT TREATMENT

Melting Range	895-900 °C
Hot Working	630-730 °C
Soft Annealing	420 – 580 °C ,Duration: 1 – 3 h
Thermal Stress Relieving	180– 280 °C ,Duration: 1 – 3 h

## FABRICATION PROPERTIES

### FORMING

Forgeability Rating	100%
Machinability	90%
Cold Workability	fair
Hot Workability	Excellent

### POLISHING

Mechanical	Good
Electrolytic	Poor
Electroplating	Excellent

### Microstructure

Two phase, Alpha and Beta, with undissolved lead

### Physical properties

Thermal Expansion Coefficient [10 <sup>-6</sup> /K]	Electrical Conductivity[% IACS]	Thermal Conductivity[W/(m.K)]
20.5	24	110

### Mechanical properties M30 temper

Tensile strength(Mpa)	Yield strength(Mpa)	Elastic modulus(Gpa)	Elongation in 2 inch
360	140	108	45

### Weldability

Soldering	Brazing	Resistance butt-welding	All other welding processes
excellent	good	fair	not recommended