Ghoshouni Industrial Co.

Material Datasheet
CuZn40Pb2
(CW617N)

CuZn40Pb2

Standard alloy for hot forging

Combines good hot deformability performance with sufficient machinability for chip removal. It is compliant with requirements of the 4MS group for materials in contact with water for human consumption. It can be used in various applications: valves, taps, accessories for plumbing and heating systems, bolts, handles, terminals and components in general.

MATERIAL DESIGNATION			
International	EN	UNS	JIS
CuZn40Pb2	CW617N	C38000	-

Applications

Architectural extrusion, storethresholds fronts, and trime. Hardware: butts, Hinges and lock bodies, industrial forgings.

REFERENCE CHEMICAL COMPOSITION IN %								
material	Cu	Pb	Fe	Ni	Sn	Al	Zn	Other
min	57	1.6	0	0	0	0	Rem.	0
max	59	2.2	0.3	0.3	0.3	0.05	Rem.	0.2

HEAT TREATMENT	
Melting Range	882-893°C
Hot Working	630-730 °C
Soft Annealing	450-600 °C ,Duration: 1 – 3 h
Thermal Stress Relieving	250-350°C ,Duration: 1 – 3 h

FABRICATION PROPERTIES

FORMING	
Forgeability Rating	Good
Machinability	95%
Cold Workability	fair
Hot Workability	Excellent

POLISHING	
Mechanical	Good
Electrolytic	Poor
Electroplating	Excellent

Microstructure
Two phase, Alpha and Beta, with undisolved lead

Physical properties			
Thermal Expansion Coefficient [10-6/K]	Electrical Conductivity[% IACS]	Thermal Conductivity[W/(m.K)]	Density [g/cm3]
17.7	14.9	113	8.4

Mechanical properties M30 temper			
Tensile strength(Mpa)	Yield strength(Mpa)	Elastic modulus(Gpa)	Elongation in 2 inch
415	140	97	50

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