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LS

Material designation	
CuZn37Pb2	
EN 12164 / EN 12167	CW606N
NF A 51-105	CuZn35Pb2
BS 2872-2874	CZ131
ASTM B453	C35300

Chemical composition*

Elements	% mean	Impurities	% max.
Cu	61.7	Fe	0.15
Pb	1.8	Sn	0.15
		Ni	0.10
		Al	0.05
Zn	balance	Other	0.25

* Reference values in % by weight

Properties and typical applications

Brass for crimping, turning and hot forging. It has good machinability and a certain ability to be cold worked (crimping, riveting, etc.). Electrical equipment, connectors, connections for fluids…

Physical properties at 20°C	
Density (g/cm3)	8.5
Young modulus (GPa)	105
Thermal expansion coefficient (20-300°C) (10^{-6}/K)	20
Thermal conductivity (W/m.K)	105
Thermal capacity (J/Kg.K)	380
Electrical conductivity (% I.A.C.S.)	24

Heat treatment	
Melting range (°C)	885-910
Hot working (°C)	650-750
Annealing temperature (°C)*	450-600
Stress relieving treatment (°C)**	250-350

Annealing treatment of a material leads to reduce its hardness and increase its ductility.

****Stress relieving treatment allows to eliminate the residual stresses present in the material in ordrer to avoid the stress corrosion cracking.***

Forming	
Hot forming	Very good
Cold forming	Fair
Machinability	85% (Ref: CuZn39Pb3 = 100%)

Corrosion resistance

Free-cutting brasses generally have good resistance to corrosion in organic materials and neutral or alkaline compounds. However, they may present a problem of cracking corrosion in an aggressive environment in the presence of internal stresses, but also a risk of dezincification in the presence of hot and acidic water.

Joining	
Soldering	
Soft	Excellent
Hard	Good
Welding	
Gaz welding	Not recommanded
Inert gas shielded arc welding	Not recommanded
Resistance welding	Not recommanded

Mechanical properties according to EN12164

Condition of material	Diameter [mm] from	Diameter [mm] to	Rp0,2 [Mpa] min. or max.	Rm [Mpa] min.	A(%) min.	Hardness HB
M	All		As extruded - without specific mechanical properties			
R340	10	80	< 280	340	20	-
H070			-	-	-	70-120
R400	6	25	> 200	400	12	-
H100			-	-	-	100-140
R480	6	14	> 350	480	8	-
H125			-	-	-	> 125

Fabrication range

Available forms: 

Do not hesitate to contact us for further information regarding the dimensions, tolerances and metallurgical conditions.
Our technical teams are by your side to help you succeed in your projects.
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