

CW712R

- High Tensile Brass -

SN2

Material designation		Chemical composition*			
CuZn36Sn1Pb		Elements	% mean	Impurities	% max.
EN 12163 / 12165 / 12167	CW712R	Cu	62	Fe	0.1
BS 2872 - 2874	CZ112	Sn	1.25	Ni	0.2
		Pb	0.4	Other	0.2
		Zn	Balance		

* Reference values in % by weight

Properties and typical applications

SN2, often referred to as "Naval Brass" due to its improved resistance to corrosion in seawater, is typically used in a range of marine and mechanical applications (heat exchanger, bolts, rivets...)

Physical properties at 20°C		Heat treatment	
Density (g/cm3)	8.4	Melting range (°C)	885-910
Young modulus (GPa)	103	Hot working (°C)	650-750
Thermal expansion coefficient (20-300°C) (10 ⁻⁶ /K)	20	Annealing temperature (°C)*	450-600
Thermal conductivity (W/m.K)	120	Stress relieving treatment (°C)**	300-400
Thermal capacity (J/Kg.K)	380	<i>* Annealing treatment of a material leads to reduce its hardness and increase its ductility.</i>	
Electrical conductivity (% I.A.C.S.)	26	<i>** Stress relieving treatment allows to eliminate the residual stresses present in the material in order to avoid the stress corrosion cracking.</i>	

Forming		Joining	
Hot forming	Good	Soldering	
Cold forming	Good	Soft	Excellent
Machinability	70% (CuZn39Pb3 = 100%)	Hard	Good
Corrosion resistance		Welding	
The addition of tin considerably improves the corrosion resistance of the alloy, especially in sea water and slightly aggressive environments.		Gaz welding	Good
		Inert gas shielded arc welding	Not recommended
		Resistance welding	Fair

Mechanical properties according to EN12164						
Condition of material	Diameter [mm]		Rp0,2 [Mpa] min.	Rm [Mpa] min.	A(%) min.	Hardness HB
	from	to				
M	All		As extruded - without specific mechanical properties			
R340	6	60	160	340	25	-
H080			-	-	-	80-120
R400	6	50	200	400	20	-
H105			-	-	-	105-135

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.

info@m-lego.com