

CW716R

- High Tensile Brass -

HM4

Material designation		Chemical composition*			
CuZn37Al1		Elements	% mean	Impurities	% max.
		Cu	60	Sn	0.3
		Pb	0.65	Fe	1,0
		Mn	1	Ni	0,6
		Al	1	Autre	0.3
		Zn	balance		
EN 12163 (version 1998)	CW716R				
DIN 17660	CuZn37Al1-2.0510				

* Reference values in % by weight

Properties and typical applications

High tensile brass for machining and hot working. Rings, bearings, pump elements...

Physical properties at 20°C		Heat treatment	
Density (g/cm ³)	8.2	Melting range (°C)	890-910
Young modulus (GPa)	93	Hot working (°C)	650-750
Thermal expansion coefficient (20-300°C) (10 ⁻⁶ /K)	21	Annealing temperature (°C)*	500-600
Thermal conductivity (W/m.K)	63	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.)	13		
		** <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	Very good	Soldering	
Cold forming	Fair	Soft	Fair
Machinability	50% (CuZn39Pb3 = 100%)	Hard	Fair
Corrosion resistance		Welding	
Special brass alloys show in general a good corrosion resistance in neutral, alkaline and organic fluids due to alloying elements.		Gaz welding	Not recommended
		Inert gas shielded arc welding	Not recommended
		Resistance welding	Not recommended

Mechanical properties according to EN12163 (version 1998)

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			
R490	6	40	210	490	18	-
H120			-	-	-	120-150
R550	6	14	280	550	10	-
H150			-	-	-	> 150

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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