

## CW713R

## - High Tensile Brass -

## H55

Material designation		Chemical composition*			
<b>CuZn37Mn3Al2PbSi</b>		Elements	% mean	Impurities	% max.
EN 12164	CW713R	Cu	58.7	Fe	0.25
EN 12165	CW713R	Pb	0.6	Ni	0.2
EN 12167	CW713R	Mn	1.75	Other	0.2
		Si	0.45		
		Al	1.45		
		Zn	balance		

\* Reference values in % by weight

### Properties and typical applications

H55 is a high tensile brass with excellent wear resistance suitable for machining and hot working processes.

Physical properties at 20°C		Heat treatment	
Density (g/cm <sup>3</sup> )	8.2	Melting range (°C)	875-910
Young modulus (GPa)	92	Hot working (°C)	650-700
Thermal expansion coefficient (20-300°C) (10 <sup>-6</sup> /K)	20	Annealing temperature (°C)*	450-550
Thermal conductivity (W/m.K)	64	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	Excellent	<b>Soldering</b>	
Cold forming	Not recommended	Soft	Not recommended
Machinability	80% (Réf : CuZn39Pb3 = 100%)	Hard	Not recommended
Corrosion resistance		<b>Welding</b>	
Special brass alloys show in general a good corrosion resistance in neutral, alkaline and organic fluids due to alloying elements.		Gaz welding	Fair
		Inert gas shielded arc welding	Good
		Resistance welding	Good

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			
R540	6	80	280	540	15	-
H130			-	-	-	130-170
R590	6	50	370	590	10	-
H150			-	-	-	150-220

### 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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