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CW725R

- Dezincification Resistant Special Brass -

ND5

Material designation		Chemical composition*			
CuZn33Pb1AlSiAs		Elements	% mean	Impurities	% max.
		Cu	64.5	Fe	0.3
		Pb	0.65	Ni	0.2
		Si	0.2	Mn	0.1
		Al	0.25	Sn	0.3
		As	0.065		
		Zn	balance	Other	0.3
EN 12164	CW725R				
EN 12165	CW725R				
EN 12167	CW725R				

* Reference values in % by weight

Properties and typical applications

ND5 is a dezincification resistant alloy, due to the presence of arsenic, suited for the application in drinking water in Europe. This alloy can be used for machining and hot stamped parts. Cold working can also be possible.

Physical properties at 20°C		Heat treatment	
Density (g/cm ³)	8.5	Melting range (°C)	875-910
Young modulus (GPa)	105	Hot working (°C)	650-750
Thermal expansion coefficient (20-300°C) (10 ⁻⁶ /K)	20	Annealing temperature (°C)*	450-550
Thermal conductivity (W/m.K)	101	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.)	22		
		** <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	Good
Machinability	75% (CuZn39Pb3 = 100%)	Hard	Fair
Corrosion resistance		Welding	
This alloy has a good resistance to dezincification phenomenon. After exposure to temperatures > 600 °C, a heat treatment at 500–550°C for 2-3 hours is necessary to have optimal dezincification resistance. It is also important to take into account the problem of cracking corrosion especially in an ammoniacal medium in the presence of mechanical tensions.		Gaz welding	Not recommended
		Inert gas shielded arc welding	Not recommended
		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			
R290	6	80	< 200	290	30	-
H070			-	-	-	70-110
R320	6	60	> 200	320	20	-
H90			-	-	-	90-135
R400	6	15	> 250	400	8	-
H105			-	-	-	> 105

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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