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TECHNICAL DATA SHEET

CW724R - CuZn21Si3P

ECOBRASS

RODS / HOLLOW RODS

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CW724R - CuZn21Si3P

Product Code	EN Symbol	EN No	ASTM		Cu	Zn	Pb	Sn	Fe	Ni	Al	Mn	P	Si	Others Total
ECOBRASS	CuZn21Si3P	CW724R	C69300	Min (%)	75,0	Rest	-	-	-	-	-	-	0,02	2,7	-
				Max (%)	77,0	Rest	0,09	0,2	0,3	0,2	0,05	0,05	0,10	3,5	0,2

(*)Each of the other elements< 0,02 %

Features And Applications

This lead free alloy is patented. Chips and parts should not be mixed with other alloys. It has many features such as good machinability, high durability, recyclability, perfect corrosion resistance, good forgeability. Ecobrass can be produced as rods, hollows, profiles suitably for both forging and machining. Ecobrass meets ISO 6509 requirements regarding the dezincification resistance. Also this alloy compliance with UBA Hygienic list, 4MS, ELV, RoHS II and REACH directives.

4MS and UBA Hygienic list group for CW724R alloy: B, C, Di

Area of Usage

Automotive industry, naval industry , plumbing and drinking water applications. Also this alloy suitable for drinking water application in USA and Canada Markets.

Range of Products

CW724R can be produced in our extrusion and cold drawing unit as rods, hollows and profiles suitable for both forging and machining. Please contact us for other technical informations.

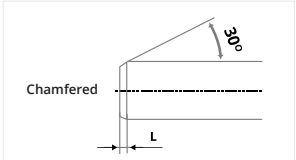
TECHNICAL SPECIFICATIONS

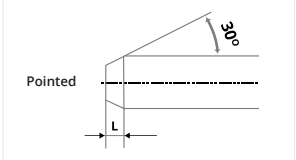
Structure	kappa+gama	Melting Point	860-925 °C
Machinability	% 80	Hot Forming	680-750 °C
Density	8,25 g/cm^3	Soft Annealing	530-650 °C
Electrical Conductivity	4,5 MS/m, 7,8 %IACS	Soft Annealing Time	1-3 Hours
Thermal Conductivity	35 W/(m·K)	Stress Relieving	200-300 °C
Elasticity Module	ca.100 GPa	Stress Relieving Time	1-3 Hours
Coeff. of Thermal Expansion	19.7 10^{-6}/K	Max. Depth of Dezincification	<100 µm

INDICATIVE SHAPED ENDS DIMENSIONS

Nominal Diameter or Width		Type A – Chamfer Lenght (L)		Type B – Point Lenght (L)	
Across-Flats (mm) Over	Up to and including	Min (mm)	Max (mm)	Min (mm)	Max (mm)
-	10	0,2	1,5	2	7
10	20	0,2	2	3	10
20	30	0,2	3	4	12

Unless otherwise specifed by the buyer, the shape of the ends of products larger than 30 mm is up to the supplier.





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Nominal Diameter or Width Across-flats (mm)		Preferred (available) Lengths (mm)	Tolerance on Length (mm)
Over	Up to and including		
10[inc.]	30	3.000-4.000	±50
30	65	3.000-4.000	±100

Stress Relieving The polygonal rods and hollow rods are subjected to stress relieving treatment

Packaging 500 or 1000 kg bundle – 3/5 metal straps different bundle packagings, up to 10 mm dimension products are packed with wooden case

EN 12164 - Rods for Free Machining

Material Condition	Nominal Diameter (mm)		Width Across-Flats (mm)		Tensile Strength Rm N/mm² (MPa)	0,2 % Proof Strength N/mm² (MPa)		Elongation			Hardness (HBW)	
	Over	Up to and inc	Over	Up to and inc	Min	Min	Max	A100mm (%) Min	A11,3 (%) Min	A (%) Min	Max	Max
M	All		All		As manufactured							
R500	10	65	10	55	500	-	450	-	-	15	-	-
H130	10	65	10	55	-	-	-	-	-	-	130	180
R600	10	25	10	20	600	300	-	-	-	12	-	-
H150	10	25	10	20	-	-	-	-	-	-	150	220

EN 12168 - Hollow Rods for Free Machining

Material Condition	Wall Thickness (mm)		Tensile Strength Rm N/mm² (MPa)	0,2 % Proof Strength N/mm² (MPa)		Elongation A (%)	Hardness (HBW)		Hardness (HV)	
	Over	Up to and inc	Min	Min	Max	Min	Min	Max	Min	Max
M	All			As manufactured						
R500	4	20	500	-	450	15	-	-	-	-
H130	4	20	-	-	-	-	130	180	140	190
R600	4	20	600	350	-	12	-	-	-	-
H150	4	20	-	-	-	-	150	220	160	230

EN 12165 - Wrought and Unwrought Forging Stocks

Material Condition	Nominal Diameter (mm)		Hardness (HBW)	
	Over	Up to and inc	Min	Max
M	All		As manufactured	

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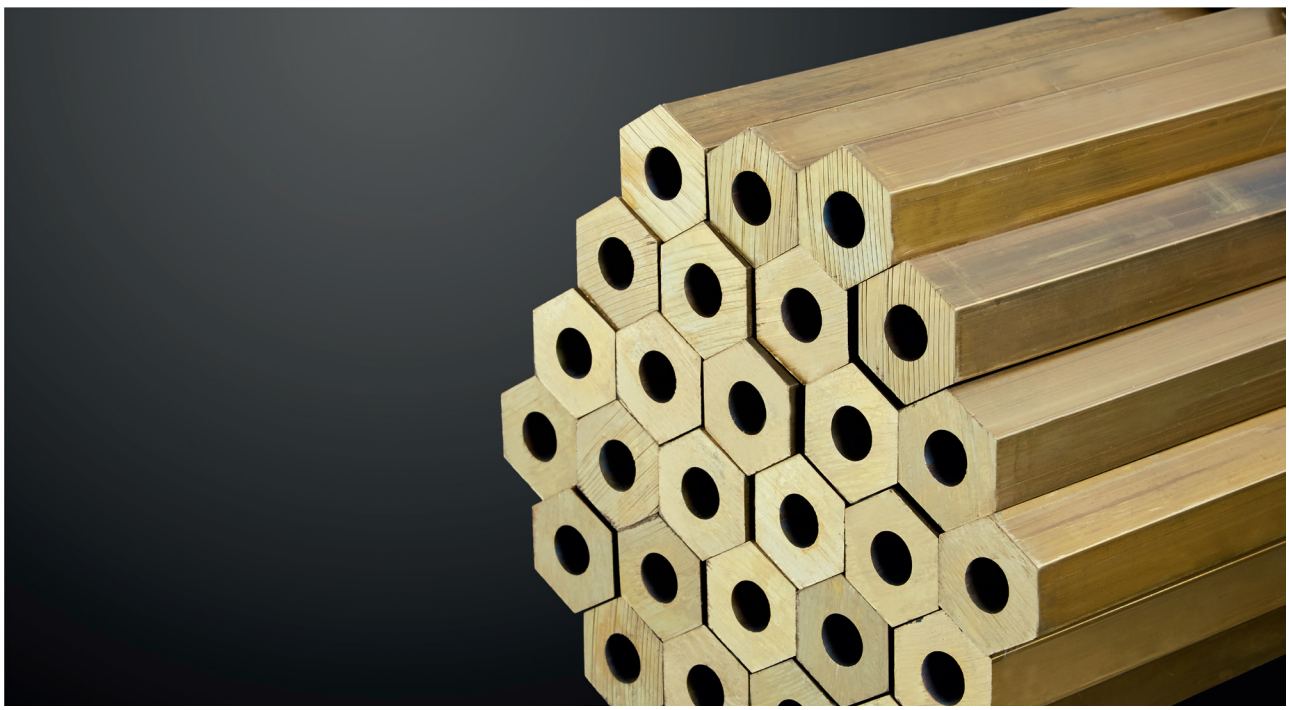
STANDARD		EN 12164			EN 12165		EN 12168				
Dimension Range		Round Rod		Hexagonal, Square	Round Rod		Round and Hexagonal Hollow Rod, Outer Dim. Tol.		Hole Tolerance Round		Hole Tol. Hexagonal
Over	Up to & inc.	Class A	Class B	Rod	Class A	Class B	Class A	Class B	Class A	Class B	-
-	10	0 -0,06	0 -0,036	0 -0,09	±0,25	±0,14	-	-	-	-	-
10	13	0 -0,07	0 -0,043	0 -0,11	±0,25	±0,14	-	-	-	-	-
13	18	0 -0,07	0 -0,043	0 -0,11	±0,25	±0,14	-	-	±0,35	-	+0,70 -0
18	20	0 -0,08	0 -0,052	0 -0,13	±0,30	±0,17	-	-	±0,42	-	+0,84 -0
20	23	0 -0,08	0 -0,052	0 -0,13	±0,30	±0,17	-	-	±0,42	-	+0,84 -0
23	26	0 -0,08	0 -0,052	0 -0,13	±0,30	±0,17	-	0 -0,21	±0,42	-	+0,84 -0
26	30	0 -0,08	0 -0,052	0 -0,13	±0,30	±0,17	-	0 -0,21	±0,42	-	+0,84 -0
30	50	0 -0,16	-	0 -0,16	±0,60	±0,20	-	0 -0,25	±0,80	-	+1,6 -0
50	55	0 -0,19	-	0 -0,19	±0,70	±0,37	-	0 -0,46	±0,95	-	-
55	65	0 -0,19	-	-	±0,70	±0,37	±0,60	0 -0,46	±0,95	-	-
65	80	0 -0,19	-	-	±0,70	±0,37	±0,60	0 -0,46	-	-	-
80	90	-	-	-	±2	-	-	-	-	-	-

For Hollow Rods

Minimum wall thickness is 4 mm. Eccentricity: %8 (max).
Minimum wall thickness is 5 mm over 65 mm.
"For hollows, maximum outer diameter is Ø78 mm and maximum producible weight is 28 kg in 1 meter."

Outer Cold Drawn - Internal Extruded
Outer Class B - Hole Class A tolerance

Inner-Outer Extruded
Outer Class A - Hole Class A tolerance



Rev: 01.2025

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