

sarbak



## TECHNICAL DATA SHEET

**CW724R - CuZn21Si3P**

**ECOBASS  
(PATENTED)  
RODS / HOLLOW RODS**

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

EPA approved antimicrobial alloy.

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

## 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.

## TECHNICAL SPECIFICATIONS

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

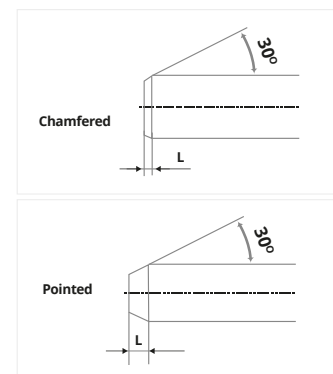
## Range of Products

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.

## INDICATIVE SHAPED ENDS DIMENSIONS

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

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



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	80	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 R <sub>m</sub> N/mm <sup>2</sup> (MPa) <b>Min</b>	0,2 % Proof Strength N/mm <sup>2</sup> (MPa)		Elongation			Hardness (HBW)	
	Over	Up to and inc.	Over	Up to and inc.		Min	Max	A <sub>100mm</sub> (%) <b>Min</b>	A <sub>11,3</sub> (%) <b>Min</b>	A (%) <b>Min</b>	Min	Max
M	All		All		As manufactured							
R500	10	80	35	55	500	-	450	-	-	15	-	-
H130	10	80	35	55	-	-	-	-	-	-	130	180
R600	10	40	15	40	600	300	-	-	-	12	-	-
H150	10	40	15	40	-	-	-	-	-	-	150	220
R670	10	20	10	15	670	400	-	8	9	10	-	-
H170	10	20	10	15	-	-	-	-	-	-	170	-

### EN 12168 - Hollow Rods for Free Machining

Material Condition	Wall Thickness (mm)		Tensile Strength R <sub>m</sub> N/mm <sup>2</sup> (MPa) <b>Min</b>	0,2 % Proof Strength N/mm <sup>2</sup> (MPa)		Elongation A (%) <b>Min</b>	Hardness (HBW)		Hardness (HV)	
	Over	Up to and inc.		Min	Max		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
R650	4	7	650	400	-	10	-	-	-	-
H170	4	7	-	-	-	-	170	-	180	-

### EN 12165 - Wrought and Unwrought Forging Stocks

Material Condition	Nominal Diameter (mm)		Hardness (HBW)	
	Over	Up to and including	Min	Max
M	All		As manufactured	
H130	8	80	130	220

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	±0,17	+0,84 -0
23	26	0 -0,08	0 -0,052	0 -0,13	±0,30	±0,17	-	0 -0,21	±0,42	±0,17	+0,84 -0
26	30	0 -0,08	0 -0,052	0 -0,13	±0,30	±0,17	-	0 -0,21	±0,42	±0,17	+0,84 -0
30	50	0 -0,16	-	0 -0,16	±0,60	±0,20	-	0 -0,25	±0,80	±0,20	+1,6 -0
50	55	0 -0,19	-	0 -0,19	±0,70	±0,37	-	0 -0,46	±0,95	±0,37	-
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	±0,95	-	-
80	120	-	-	-	±2	-	-	-	-	-	-
120	140	-	-	-	±2,5	-	-	-	-	-	-

**For Hollow Rods**

Minimum wall thickness is 4 mm. Eccentricity : %10 (max.)

**Outer Cold Drawn - Internal Extruded**

Outer Class B - Hole Class A tolerance

**Inner-Outer Extruded**

Outer Class A - Hole Class A tolerance



**Headquarter**

Eđitim Mah. Adım Sok. Orjin İş Merkezi No: 10 -18 Kat: 3 Daire No: 39 - 49 34722  
Hasanpaşa / Kadıköy / İstanbul / Turkey  
T: +90 216 414 45 35 pbx | F: +90 216 414 45 40

**Factory**

Çerkezköy Organize Sanayi Bölgesi Gazi Osman Paşa Mah. 8.Cad. No: 3 59500  
Çerkezköy / Tekirdađ / Turkey  
T: +90 282 725 19 60 pbx | F: +90 282 725 19 70