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TECHNICAL DATA SHEET

CW725R - CuZn33Pb1AlSiAs

S725 - S725DW

RODS / HOLLOW RODS

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CW725R - CuZn33Pb1AlSiAs

Product Code	EN Symbol	EN No	ASTM		Cu	Zn	Pb	Sn	Fe	Ni	Al	As	Mn	P	Si	Others Total
S725	CuZn33Pb1AlSiAs	CW725R	-	Min (%)	64,0	Rest	0,4	-	-	-	0,1	0,04	-	-	0,1	-
				Max (%)	67,0	Rest	0,9	0,3	0,3	0,2	0,3	0,08	0,04	0,02	0,3	0,2
S725-DW	CuZn33Pb1AlSiAs-DW	CW725R-DW	-	Min (%)	64,0	Rest	0,4	-	-	-	0,1	0,04	-	-	0,1	-
				Max (%)	67,0	Rest	0,6	0,3	0,3	0,2	0,3	0,08	0,04	0,02	0,3	0,2

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

Features And Applications

It has many features such as good machinability, high durability, recyclability, perfect corrosion resistance, good forgeability. S725R 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, D

Area of Usage

This alloy suitable for the production of parts in contact with drinking water, plumbing parts.

Range of Products

CW725R 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.

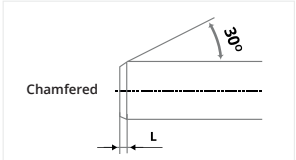
TECHNICAL SPECIFICATIONS

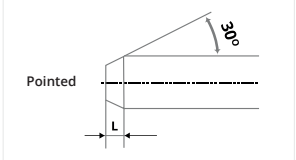
Structure	α	Melting Point	850-950 °C
Machinability	% 75	Hot Forming	650-750 °C
Density	8,55 g/cm³	Soft Annealing	450-550 °C
Electrical Conductivity	12,8 MS/m, 22 %IACS	Soft Annealing Time	1-3 Hours
Thermal Conductivity	101 W/(m·K)	Stress Relieving	200-300 °C
Elasticity Module	105 GPa	Stress Relieving Time	1-3 Hours
Coeff. of Thermal Expansion	21 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 A100mm (%)	Elongation A11,3 (%)	Elongation A (%)	Hardness (HBW)	
	Over	Up to and inc	Over	Up to and inc	Min	Min	Max	Min	Min	Min	Max	Max
M	All		All		As manufactured							
R290	10	65	10	55	290	-	200	-	25	30	-	-
H070	10	65	10	55	-	-	-	-	-	-	70	110
R320	10	60	10	50	320	200	-	-	15	20	-	-
H090	10	60	10	50	-	-	-	-	-	-	90	135
R400	10	15	10	13	400	250	-	-	5	8	-	-
H105	10	15	10	13	-	-	-	-	-	-	105	-

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						
R290	4	All	290	-	200	30	-	-	-	-
H070	4	All	-	-	-	-	70	110	80	120
R320	4	20	320	200	-	20	-	-	-	-
H090	4	20	-	-	-	-	90	135	100	145
R400	4	8	400	250	-	8	-	-	-	-
H105	4	8	-	-	-	-	105	-	115	-

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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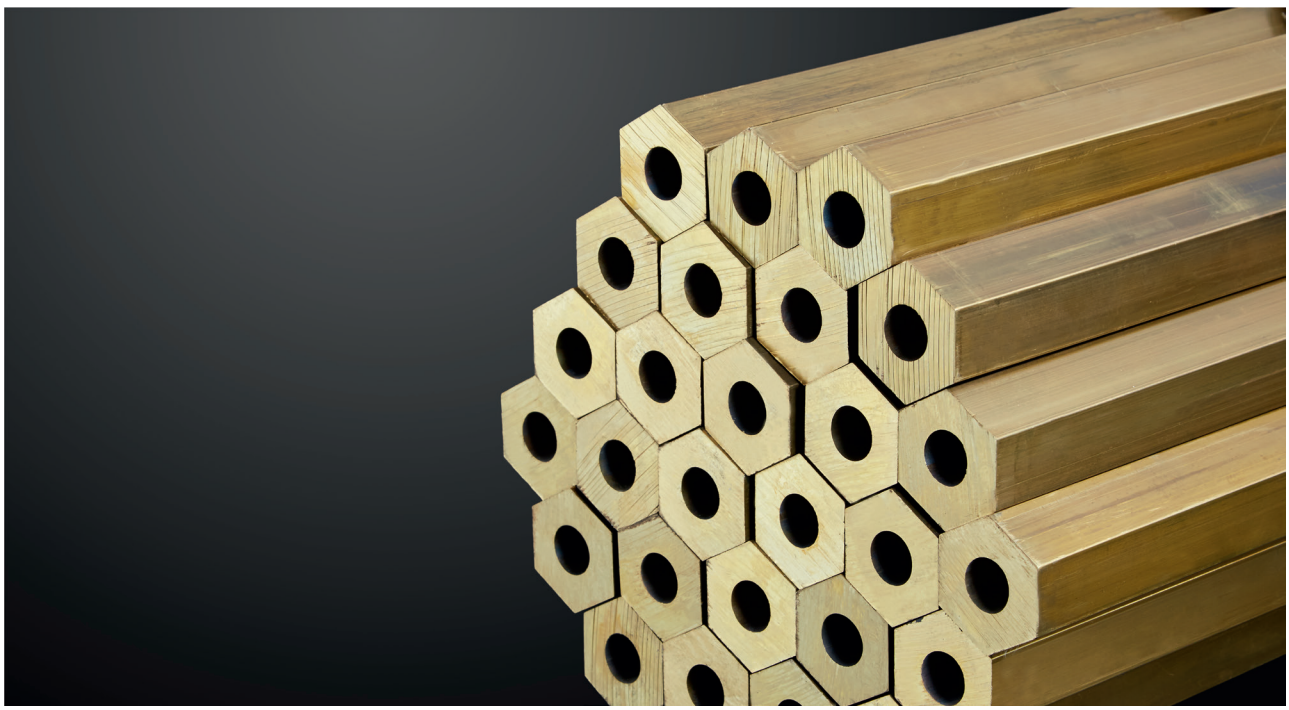
STANDARD		EN 12164			EN 12165		EN 12168				
Dimension Range		Round Rod		Hexagonal, Square	Round Rod		Round and Hexagonal Hollow Rod, Outer Dim. Tol.		Hole Tolerance Round		Hole Tol. Hexagonal
Over	Up to & inc.	Class A	Class B	Rod	Class A	Class B	Class A	Class B	Class A	Class B	-
-	10	0 -0,06	0 -0,036	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



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Headquarter

SARBAK METAL TİC. ve SAN. A.Ş.
Eğitim Mah. Adım Sok. Oran İş Merkezi No: 10 -18 Kat: 3 Daire No: 39 - 49 34722
Hasanpaşa / Kadıköy / İstanbul / Türkiye
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 / Tekirdağ / Türkiye
T: +90 282 725 19 60 pbx | F: +90 282 725 19 70

www.sarbak.com.tr | www.ekosari.com.tr