

sarbak



TECHNICAL DATA SHEET

CW709R - CuZn32Pb2AsFeSi

S709
RODS / HOLLOW RODS

Product Code	EN Symbol	EN No	ASTM		Cu	Zn	Pb	Sn	Fe	Ni	Al	Si	As	Others Total
S709	CuZn32Pb2AsFeSi	CW709R	-	Min (%)	64,0	Rem.	1,5	-	0,1	-	-	0,45	0,03	-
				Max (%)	66,5	Rem.	2,2	0,3	0,2	0,3	0,05	0,8	0,08	0,2

Features And Applications

Due to its good resistance to dezincification, it is preferred in the manufacture of parts which come in contact with water. Also this alloy compliance with RoHS II and REACH directives.

Area of Usage

Fitting parts used in aggressive (corrosive) water.

TECHNICAL SPECIFICATIONS

Structure	$\alpha+\beta$	Hot Forming	700-830 °C
Machinability	% 85	Soft Annealing	500-600 °C
Density	8,48 g/cm ³	Soft Annealing Time	1-3 hours
Electrical Conductivity	13,4 %IACS	Stress Relieving	300-400 °C
Thermal Conductivity	65 W/(m·K)	Stress Relieving Time	1-3 hours
Elasticity Module	109 GPa	Max. Depth of Dezincification	<100 μ m
Coeff. of Thermal Expansion	21 10 ⁻⁶ /K		
Melting Point	910-940 °C		

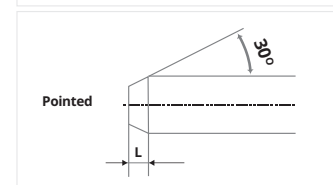
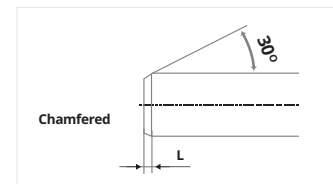
Range of Products

S709 alloy 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				
8 inc.	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		
8 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 R _m N/mm ² (MPa) Min	0,2 % Proof Strength N/mm ² (MPa)		Elongation			Hardness (HBW)	
	Over	Up to and inc.	Over	Up to and inc.		Min	Max	A _{100mm} (%)	A _{11,3} (%)	A (%)	Min	Max
M	All		All		As manufactured							
R380	8	40	8	40	380	220	-	-	15	20	110	160
R430	8	40	8	40	430	280	-	-	12	15	120	170

EN 12168 - Hollow Rods for Free Machining

Material Condition	Wall Thickness (mm)		Tensile Strength R _m N/mm ² (MPa) Min	0,2 % Proof Strength N/mm ² (MPa)		Elongation A (%)	Hardness (HBW)		Hardness (HV)	
	Over	Up to and inc.		Min	Max		Min	Max	Min	Max
M	All		As manufactured							
R380	4	15	380	220	-	20	-	-	-	-
H110	4	15	-	-	-	-	110	150	120	160
R430	4	10	430	260	-	15	-	-	-	-
H120	4	10	-	-	-	-	120	170	130	180

EN 12165 - Wrought and Unwrought Forging Stocks

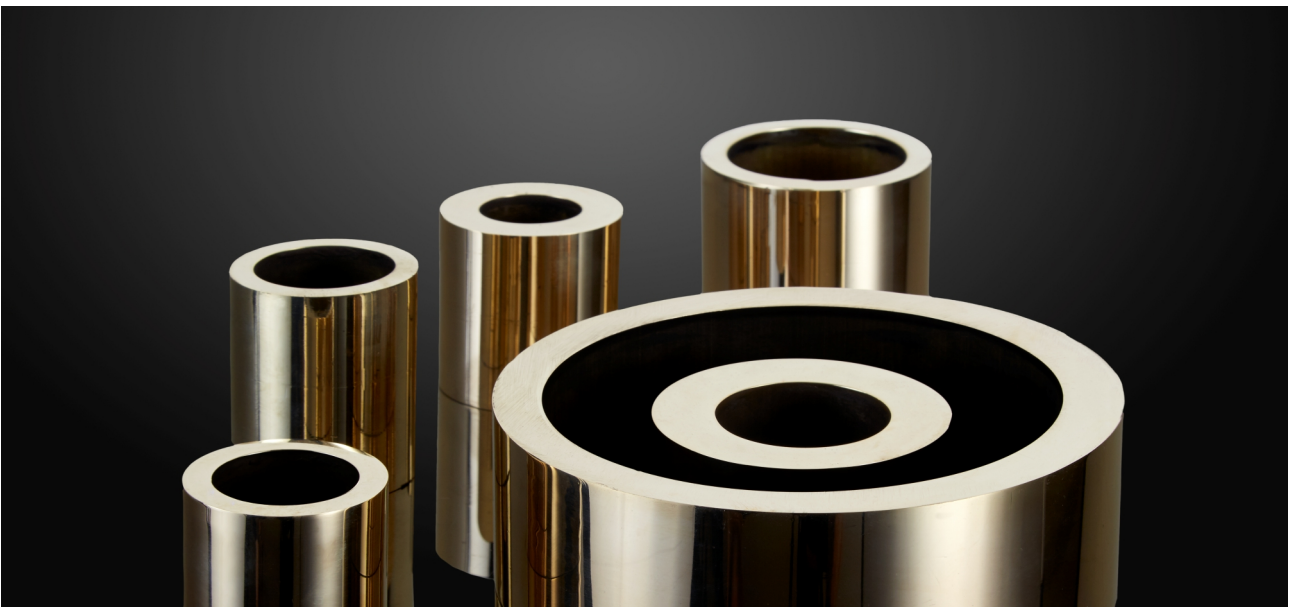
Material Condition	Nominal Diameter (mm)		Hardness (HBW)	
	Over	Up to and including	Min	Max
M	All		As manufactured	
H090	8	65	90	170

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	-
8	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	-	-	-	±0,70	-	±0,60	0 -0,46	±0,95	-
80	110	-	-	-	±2	-	-	-	-	-

For Hollow Rods

Minimum wall thickness is 4 mm. Eccentricity : % 8 (max.)

" For hollows, maximum outer diameter is 78 mm and maximum producible weight 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




Headquarter

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