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TECHNICAL DATA SHEET

CW602N - CuZn36Pb2As

S602

RODS / HOLLOW RODS

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CW602N - CuZn36Pb2As

Product Code	EN Symbol	EN No	ASTM		Cu	Zn	Pb	Sn	Fe	As	Ni	Al	Mn	Others Total
S602	CuZn36Pb2As	CW602N	C35330	Min (%)	61,0	Rest	1,7	-	-	0,02	-	-	-	-
				Max (%)	63,0	Rest	2,8	0,1	0,1	0,15	0,3	0,05	0,1	0,2

Features And Applications

CW602N alloy is standard dezincification resistant brass . CW602N meets ISO 6509 requirements regarding the dezincification resistance. Approximately 2 hours annealing at around 500° C is recommended for EN ISO 6509 standard compliance after hot forging process. Depending on the process conditions, temperature and time can also change. Also this alloy compliance with RoHS II and REACH directives.

CW602N alloy is not suitable for 4MS.

Area of Usage

Fitting parts used in aggressive (corrosive) water.

Range of Products

S602 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

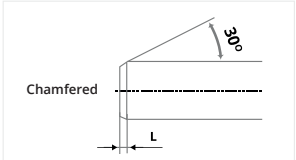
TECHNICAL SPECIFICATIONS

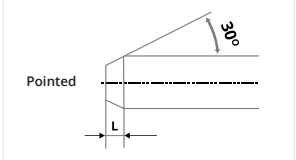
Structure	α	Melting Point	885-910 °C
Machinability	% 80	Hot Forming	720-830 °C
Density	8,46 g/cm³	Soft Annealing	450-550 °C
Electrical Conductivity	14,7 MS/m, 25 %IACS	Soft Annealing Time	1-3 Hours
Thermal Conductivity	114 W/(m·K)	Stress Relieving	250-350 °C
Elasticity Module	105 GPa	Stress Relieving Time	1-3 Hours
Coeff. of Thermal Expansion	20,3 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)		**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 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	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 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							
R280	10	65	10	55	280	-	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							
R280	4	All	280	-	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 including	Min	Max
M	All		As manifactured	

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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 C	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 -0,13	±0,42	±0,17	+0,84 -0
30	50	0 -0,16	-	0 -0,16	±0,60	±0,20	-	0 -0,25	0 -0,16	±0,80	±0,20	+1,6 -0
50	55	0 -0,19	-	0 -0,19	±0,70	±0,37	-	0 -0,46	0 -0,30	±0,95	±0,37	-
55	65	0 -0,19	-	-	±0,70	±0,37	±0,60	0 -0,46	0 -0,30	±0,95	-	-
65	80	0 -0,19	-	-	±0,70	±0,37	±0,60	0 -0,46	0 -0,30	-	-	-
80	110	-	-	-	±2	-	-	-	-	-	-	-

For Hollow Rods

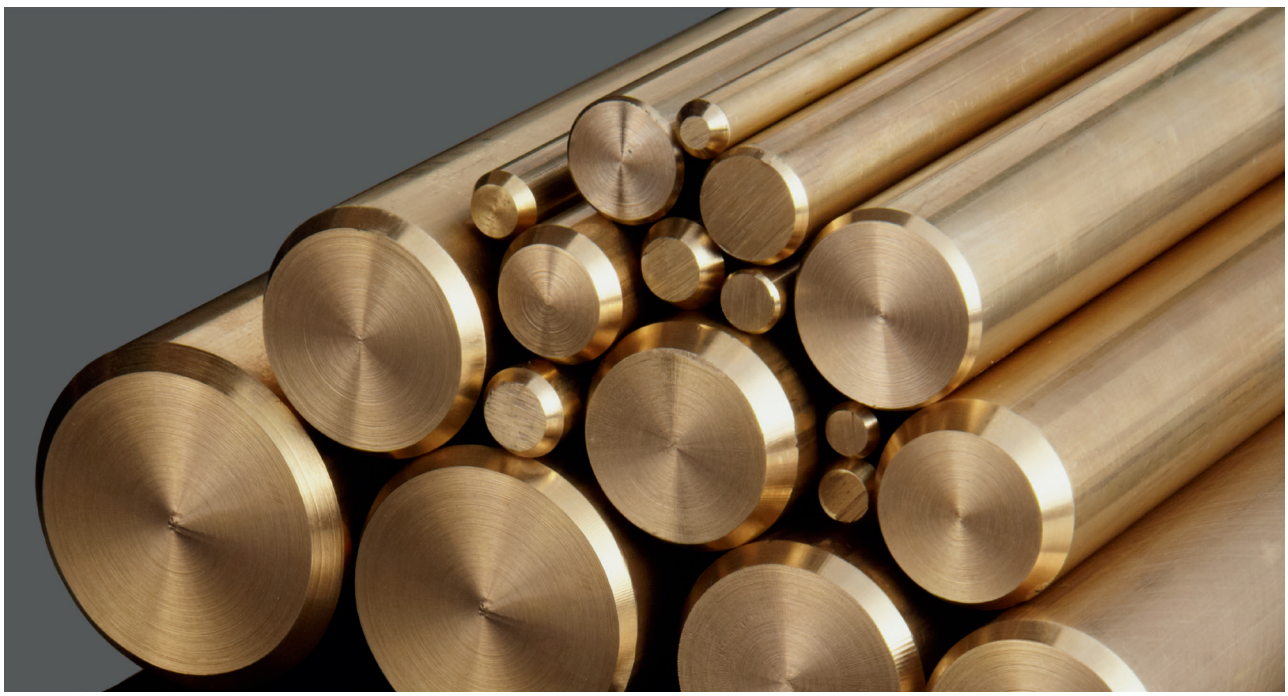
Minimum wall thickness is 4 mm. Eccentricity: %8 (max).
Minimum wall thickness is 5 mm over 65 mm.

"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 Cold Drawn
Outer Class C - Hole Class B tolerance

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



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