



# EVREN

**CuZn35Pb1.5AlAs - CW625N**  
**E625N-DW**

**TECHNICAL DATA SHEET**

FREE MACHINING / HOT FORGING / HOLLOW RODS

# Dezincification resistant alloy.

**CW625N**  
**CuZn35Pb1.5AlAs**

## ALLOY NAME

UNI EN: CW625N - CuZn35Pb1.5AlAs    DIN: 50930-6

## CHEMICAL COMPOSITION

(%)	Cu	Pb	Fe	Sn	Al	Ni	As	Zn	Others
min.	62,00	1,20	-	-	0,5	-	0,02	rem.	-
max.	64,00	1,60	0,3	0,3	0,7	0,2	0,15		0,2

Elements not listed must be < 0,02 % , Group of restriction of the surface in contact with drinking water : B & D

## TOLERANCES AND LENGTH

STANDARD		EN 12164			EN 12165		EN 12168					
Nominal Diameter		Round		Regular polygonal rod	Round		Tolerance on diameter or width across-flats			Tolerances on bore diameter		Bore dia. Polygonal
over	up to & incl.	Class A	Class B		Class A	Class B	Class A	Class B	Class C	Class A	Class B	
6	10	0 -0,06	0 -0,036	0 -0,09	+0,25	+0,14	-	-	-	-	-	-
10	13	0 -0,07	0 -0,43	0 -0,11	+0,25	+0,14	-	-	-	-	-	-
13	18	0 -0,07	0 -0,43	0 -0,11	+0,25	+0,14	-	-	-	+0,35	-	+0,70 -0
18	30	0 -0,08	0 -0,52	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	+0,31	0 -0,25	0 -0,16	+0,80	+0,20	+1,6 -0
50	80	0 -0,19	-	0 -0,19	+0,70	+0,37	+0,60	0 -0,46	0 -0,30	+0,95	-	-
80	120	-	-	-	+2	-	-	-	-	-	-	-
120	140	-	-	-	+2,5	-	-	-	-	-	-	-

Nominal external diameter or width across-flats(mm)		Preferred Lengths (mm)	Tolerance on Length (mm)
over	up to and including		
2	30	3000 and 4000	50
30	50	3000 and 4000	100
50	80	3000	100

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## STRAIGHTNESS

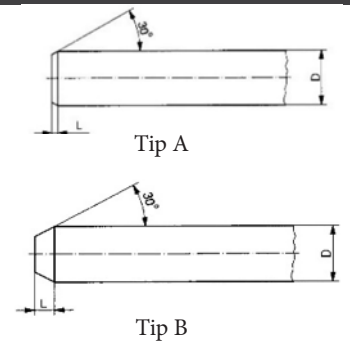
Nominal diameter or width across-flats (mm)	Maximum Deviation from straightness (TS EN 12164:2016)			
	any 400mm length	over whole length 1m	any 400mm length	over whole length 1m
	Round Rod		Polygonal Rod	
10mm - 50mm (including)	0,4	1,0 X M	0,6	1,5 X M

Nominal diameter or width across-flats (mm)	Maximum Deviation from straightness (TS EN 12165:2016)	
	any 400mm length	over whole length 1m
	Round Rod	
10mm - 60mm (including)	1,5	3,0 X M

Nominal diameter or width across-flats (mm)	Maximum Deviation from straightness (TS EN 12168:2012)			
	any 400mm length	over whole length 1m	any 400mm length	over whole length 1m
	Round Rod		Polygonal Rod	
12mm - 50mm (including)	0,7	1,5 X M	1,0	2,0 X M

## CHAMFER

Nominal diameter or width across-flats(mm)		Type A (Chamfer) Length L		Type B (Point) Length L	
over	up to and including.	min	max	min	max
5	10	0,2	1,5	2	7
10	20	0,2	2	3	10
20	30	0,2	3	4	12



## TECHNICAL PROPERTIES

Density (g/cm <sup>3</sup> )	8,40	Coef. of thermal exp. (10 <sup>-6</sup> /K)	21,3
Melting point (°C)	875	Hot Forming	Poor
Specific Heat (J/g°C)	380	Cold Forming	Moderate
Electrical Conductivity %IACS	19	Machinability	40%
Thermal Conductivity	93	Stress Relieving	200°C - 250°C
Elasticity Module (Gpa)	100	Annealing	450°C - 550°C

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## MECHANICAL PROPERTIES / FREE MACHINING RODS

TS EN 12164:2016

Material Condition	Diameter(mm)		Width across-flats (mm)		Hardness HB		Tensile strength Rm N/mm <sup>2</sup> min	0,2 % proof strength Rp <sub>0,2</sub> N/mm <sup>2</sup>		Elongation	
	over	up to and including	over	up to and including	min	max		min	max	A11,3 %	A%
										min	max
M	All		All		As manufactured						
R280	6	80	5	60	-	-	280	-	200	25	30
H070	6	80	5	60	70	110	-	-	-	-	-
R320	6	60	5	50	-	-	320	200	-	15	20
H090	6	60	5	50	90	135	-	-	-	-	-
R400	4	15	4	13	-	-	400	250	-	5	8
H105	4	15	4	13	105	-	-	-	-	-	-

## MECHANICAL PROPERTIES / HOT FORGING RODS

TS EN 12165:2016

Designations		Material Condition	Diameter (mm)		Hardness HB	
Material			over	up to and including	min.	max.
Symbol	Number					
CuZn35Pb1,5AlAs	CW625N	M	All		As manufactured	
		H070	8	120	70	110

## MECHANICAL PROPERTIES / HOLLOW RODS

TS EN 12168:2012

Material Condition	Thickness (mm)		Hardness HB		Tensile Strength Rm N/mm <sup>2</sup> min.	0,2 % proof strength Rp <sub>0,2</sub> N/mm <sup>2</sup>		Elongation	
	from	up to and including	min.	max.		min.	max.	A%	
								max.	
M	All		As manufactured						
R280	2	All	-	-	280	-	200	30	
H070	2	All	70	110	-	-	-	-	
R320	2	20	-	-	320	200	-	20	
H090	2	20	90	135	-	-	-	-	
R400	2	8	-	-	400	250	-	8	
H105	2	8	105	-	-	-	-	-	

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