ALMAG

DATA SHEET:
CZ727R CW727R

FREE MACHINING

HUG

CZ727R CW727R

ANTIDEZINCIFYING ALLOY SUITABLE FOR CONTACT WITH DRINKING WATER

New lead-free alloy specially developed to be used in contact with drinking water. The antidezincifying effect of tin and phosphorus allows the elimination of arsenic ensuring the alloy greater mechanical characteristics.

NAME OF ALLOY

UNI EN: CW727R - CuZn35Sn1P

CHEMICAL COMPOSITION (waiting for standardization)

Cu	Pb	Sn	Fe	Ni	Si	Al	P		Zn	Others
min 63.5 max 65.0%	≤0.10 %	0.5 % 1.0 %	≤0.10 %	≤0.10 %	≤0.10 %	≤0.05 %	0.05 % 0.15 %		diff.	≤0.2 %

Elements not listed must be ≤0.02 %.
4MS Group of restriction of the surface in contact with drinking water: B,D.

HEAT TREATMENTS

STRESS RELIEVING

Enables the redistribution of tensions induced by mechanical processing of cold plastic deformation, reducing the risk of stress corrosion cracking.
The treatment consists of heating the items to 200°C - 250°C for 2 hours and cooling within the furnace. The validation of the stress relieving treatment can be performed with the ISO 6957 test.

SOLUBILIZATION OF RESIDUAL β PHASE

Heat treatment already carried out by Almag Spa on all the drawn products to eliminate the residual beta phase. This treatment renders the alloy optimally dezincification resistant.
Heat treatments other than stress relieving are not advised.

MECHANICAL PROPERTIES (waiting for standardization)

Condition of material	Diameter in mm		Hardness HBW*		Rm	$Rp_{0.2}$ N/mm²		Elongation %
	from	to (included)	min.	max.	min.	min.	max.	min.
M	All		As manufactured					
R320	16	42 (24)	-	-	320	-	200	20
H070	16	42 (24)	70	110	-	-	-	-
R400	6	15 (14)	-	-	400	250	-	8
H090	6 (5)	15 (14)	90	135	-	-	-	-

*the hardness value is determined in the mid-range
The values in brackets refer to the hexagonal section bar.
Any other conditions must be requested when ordering - subject to feasibility request.

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Antidezincifying alloy suitable for contact with drinking water

TECHNOLOGICAL PROPERTIES

low ▯▯▯▯▯▯▯ excellent

Structure	α	**Machinability**	■■■▯▯▯▯
Density	8.5 kg/dm³	**Weldability**	■■■■■■▯
Electrical conductivity	27% IACS	**Hot forming**	■■■■■▯▯
Coeff. of thermal expansion	20.5 10^{-6}/K	**Cold forming**	■■■■■■▯
Thermal conductivity*	117 W/(m K)	**Corrosion resistance****	<100 µm
Specific heat	377 J/(kg K)		
Elasticity module	103 kN/mm²		
Melting point	880-910 °C		

*at room temperature
**use care to ascertain compatibility with chemical substances

DIMENSIONS, TOLERANCES, AND STRAIGHTNESS (waiting for standardization)

ROUND section bar					HEXAGONAL and SQUARE		
Nominal diameter (mm)		TOLERANCES			Nominal key (mm)		Tolerance mm
from	to included	Class A	Class B	Class C	from	to included	
6	10	0 - 0.06	0 - 0.036	0 - 0.025	6	10	0 - 0.09
10	18	0 - 0.07	0 - 0.043		10	18	0 - 0.11
18	30	0 - 0.08	0 - 0,052		18	30	0 - 0.13
30	42	0 - 0.16			30	42	0 - 0.16

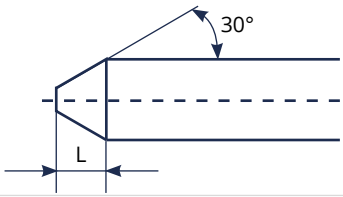
The standard tolerance for the round bar is Class A. Any different tolerances must be agreed upon when ordering

Diameter (mm)		Length of bar (mm)	Tolerance (mm)
2	30	3000 o 4000	+/- 50
30	42	3000 o 4000	+/- 100

Diameter or Key (mm)		Deviation from straightness in mm	
		Every 400 mm	Every m of length L ≥ 1
Round section bar			
10	42	0.8	2.0 x L
Hexagonal and square section bar			
10	42	1.2	3.0 x L

BAR FINISHING AND PACKAGING

Diameter or Key (mm)		Chamfer Length L mm		Tip Length L mm	
5	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

Ends of round bars	finishing with chamfer and tip up to and including Ø40 mm
	finishing with chamfer and cut greater than Ø40 mm
Ends of hexagonal bars	finishing with chamfer and cut
Bar surface	pickled
Packaging	1000 kg bundle – 3/5 metal straps different bundle packagings and quantities are possible upon request
Identification	adhesive label on bundle strap
Stress relieving	the polygonal bar was subjected to stress relieving treatment

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