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DATA SHEET:
SIBRASS CW724R

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FREE MACHINING



Antidezincifying alloy with high mechanical properties.

Eco-friendly alloy of new generation, antidezincifying, arsenic-free with Pb < 0,1% and excellent mechanical properties and excellent chipability. Good attitude to the hot forging. The absence of lead make it ideal for use in contact with drinking water.

NAME OF ALLOY

UNI EN: CW724R - CuZn21Si3P

ASTM: C69300

CHEMICAL COMPOSITION UNI EN 12164 ED.2016

Cu	Pb	Sn	Fe	Ni	Al	Si	Mn	P	Zn	Other elements
min. 75.0 max 77.0%	≤0.1 %	≤0.3 %	≤0.3 %	≤0.2 %	≤0.05 %	2.7 3.5 %	≤0.05%	0.02 0.10%	diff.	≤0.2%

Elements not listed must be ≤0.02 %.

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.

ANNEALING

Re-crystallizes the alloy, reducing its hardness and increasing its ductility. The temperature of the treatment varies from 450°C to 550°C for an amount of time relative to the required results. The high temperature can induce changes in the surface appearance and in the tolerance of the finished part.

MECHANICAL PROPERTIES UNI EN 12164 ED.2016

Condition of material	Diameter in mm		Hardness HB		Rm	Rp _{0.2} N/mm ²		Elongation %	
	from	to (included)	min.	max.	min.	min.	max.	min.	
M	All		As a product						
R500	6	80 (80)	-	-	500	-	450	-	
R600	10	40 (40)	-	-	600	300	-	-	
R670	2	20 (15)	-	-	670	400	-	8	
H130	10	80 (80)	130	180	-	-	-	-	
H150	5	40 (40)	150	220	-	-	-	-	
H170	2	20 (15)	170	-	-	-	-	-	

The hardness value is determined in the mid-range.

The values in brackets refer to the hexagonal section bar.

The standard condition produced by Almag is R600 for Rm or H130 for hardness.

Any other conditions must be requested when ordering - subject to feasibility request.

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TECHNOLOGICAL PROPERTIES		low	excellent
Structure	$\alpha+k+y$	Machinability	
Density	8.3 kg/cm ³	Weldability	
Electrical conductivity	26% IACS	Hot forming	
Coeff. of thermal expansion	19.7 10 ⁻⁶ /K	Cold forming	
Thermal conductivity*	32 W/(m K)	Corrosion resistance**	Non resistente
Specific heat	377 J/(kg K)		
Elasticity module	88 kN/mm ²		
Melting point	830-920 °C		

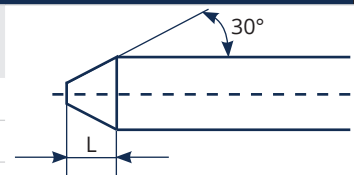
*at room temperature
**use care to ascertain compatibility with chemical substances

DIMENSIONS, TOLERANCES, AND STRAIGHTNESS UNI EN 12164 ED.2016							
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	50	0 - 0.16			30	50	0 - 0.16
50	80	0 - 0.19			50	60	0 - 0.19

The standard tolerance for the round bar is Class A. Any different tolerances must be agreed upon when ordering
Semi-finished products can be supplied from Ø63 to Ø80 mm with Class A tolerances

Diameter (mm)	Length of bar (mm)	Tolerance (mm)	Diameter or Key (mm)	Deviation from straightness in mm	
				Every 400 mm	Every m of length L ≥ 1
2	30	3000 o 4000	+/- 50		
30	50	3000 o 4000	+/- 100		
50	80	3000	+/- 100		
Round section bar					
10	50		0.8	2.0 x L	
Hexagonal and square section bar					
10	50		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



COMPANY WITH
MANAGEMENT SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =
= ISO 14001 =
= OHSAS 18001 =



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Single-member S.p.A. *A subsidiary of HUG S.p.A.*

25030 Roncadelle (BS) - Via Vittorio Emanuele II n. 39 - Fully paid share capital € 2.000.000
Tel. +39 030 2789511 - Fax +39 030 2789680 (admin.) - Fax +39 030 2789690 (sales)
F.C./VAT and Brescia Chamber of Comm. Reg. No. 03368970988 - R.E.A. No. 528368 - Cert. email almagspa@legalmail.it

