



.....

**DATA SHEET:
SYD CW725R**

.....

HOT FORGING

The logo for HUG, featuring the word "HUG" in a bold, white, sans-serif font, enclosed within a white circular border.

HUG

Special anti dezincification alloy for hot forging.

Excellent alloy for hot plastic deformation and sufficiently cold workable, it has high resistance to dezincification. Included in the 4MS "Positive list", the SYD alloy can replace the CW602N for contact with drinking water.

NAME OF ALLOY

UNI EN: CW725R - CuZn33Pb1AlSiAs

CHEMICAL COMPOSITION UNI EN 12165 ED.2016

Cu	Pb*	Sn	Fe	Ni	Al	Mn	As	Si	P	Zn
min 64.0 max 67.0%	0.4 0.6 %	≤0.3 %	≤0.3 %	≤0.2 %	0.1 0.4 %	≤0.1 %	0.05 0.08 %	0.1 0.3 %	≤0.02 %	Diff.

*Limitation according 4MS. 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 or 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

To improve the corrosion resistance of the alloy a thermal treatment between 500°C and 550°C for 2 hours with cooling outside the furnace is required. This treatment after hot stamping enhances the solubilization of the residual beta phase to grant material resistant to dezincification.

The omission of this treatment impairs the anti-dezincification performance that the material is designed for.

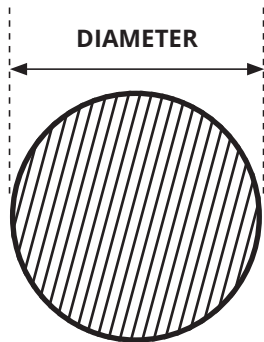
TECHNOLOGICAL PROPERTIES

low excellent

Structure	α	Machinability	
Density	8.4 kg/cm ²	Weldability	
Electrical conductivity	22% IACS	Hot forming	
Coeff. of thermal expansion	21 10 ⁻⁶ /K	Cold forming	
Thermal conductivity*	98 W/(m K)	Corrosion resistance**	<100 μm
Specific heat	377 J/(kg K)		
Elasticity module	105 kN/mm ²		
Melting point	880-920 °C		

*at room temperature

**use care to ascertain compatibility with chemical substances



MECHANICAL PROPERTIES UNI EN 12165 ED.2016

Condition of material	Diameter in mm		Hardness HB	
	from	to (included)	min.	max
M	All		As a product	
H080	8	120	70	110

Any special hardness values must be defined when ordering

Rm N/mm ²	Rp _{0.2} N/mm ²	A%
350-450*	200-300*	35-45*

* The values shown are not regulated and are only indicative

DIMENSIONS, TOLERANCES, AND STRAIGHTNESS UNI EN 12165 ED.2016

Nominal diameter (mm)		TOLERANCES		Diameter mm		Length of bar	Tolerance mm
		Class A	Class B				
10	18	+/- 0.25	+/- 0.14	10	30	3.0 - 5.0	+/- 100
18	30	+/- 0.30	+/- 0.17	30	50	3.0 - 5.0	+/- 200
30	50	+/- 0.60	+/- 0.20	50	80	3.0	+/- 300
50	80	+/- 0.70	+/- 0.37				
80	120	+/- 2					

The standard "Extruded calibrated" product is produced in Class B up to and including Ø80 mm
Semi-finished products over Ø45 mm can be supplied in the "pressed" and "rolled" forms with Class A tolerance

Diameter (mm)		Deviation from straightness in mm	
		Every 400 mm	Every m of length L ≥ 1
10	60	1.5	3.0 x L

BAR FINISHING AND PACKAGING

Bar ends	finishing with saw cut and chamfer
Bar surface	not pickled
Packaging	1000 kg bundle - 3/5 metal straps different bundle packagings and quantities are possible upon request
Identification	adhesive label on bundle strap

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



www.almag.it

ALMAG S.p.A. AZIENDA LAVORAZIONI METALLURGICHE E AFFINI GNUTTI
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

