



Material Datasheet:
CuZn38As
(CW511L)

MACHINING / STAMPING BRASS RODS

CuZn38As

Dezincification Resistant Low Lead Alloy for both machining and hot stamping rods

CuZn38As alloy integrates the 4MS Composition List of accepted metallic materials to be in contact with drinking water. It is also dezincification resistant due to its content in arsenic, thus it is ideal for manufacturing parts to be in contact with drinking for which dezincification resistance is also a requirement. It has fair characteristics for machining operations, due to its low content in lead. As for conformability, this alloy shows a fair behavior when cold formed and a good behavior when hot formed.

MATERIAL DESIGNATION

ASBW	International	EN	UNS	JIS	Further Restrictions**
B20	CuZn38As	CW511L	C27453	-	4 MS Common Approach, Part B

REFERENCE CHEMICAL COMPOSITION IN % (MAIN ELEMENTS) *

Material	Cu	Pb**	Ni**	Fe**	As	Sn**	Al**	Bi	Zn	Other elements
B20**	62,5	0,1	0,2	0,1	0,1	0,1	0,03	-	Rem.	≤ 0.2 %

* Deviations from these values may occur within the restrictions of the relevant standard specifications.

** ASBW / B20 complies with the restrictions to the chemical composition of the signed materials in the table, according to the specified in the 4 MS Common Composition List, on customer request.

FABRICATION PROPERTIES*

FORMING

Machinability (CuZn39Pb3 = 100 %)	30 %
Cold Workability	Excellent
Hot Workability	Good

JOINING

Resistance Welding (Butt Welding)	Fair
Inert Gas Shielded Arc Welding	Fair
Gas Welding (Most Commonly Oxyacetylene)	Fair
Hard Soldering	Good
Soft Soldering	Excellent
Brazing	Good

POLISHING

Mechanical	Excellent
Electrolytic	Good
Electroplating	Excellent

*Dezincification resistance is achieved through a β -phase-free microstructure. Therefore, a 550 °C/3h heat treatment of the parts is recommended after stamping or any other operation that require an exposure of the brass rods to high temperatures.

Rods		acc. to EN 12165		
Temper	Diameter		Hardness HB	
	from [mm]	to [mm]	min.	max.
M	all		As manufactured	
H070	8	120	70	110

FINISHING AND PACKAGING

Bar ends	Marked according to customer's specification
Bar surface	Standard machining rods: bright, stripped surface Standard stamping rods: Dark and uniform surface
Packaging	Size range up to 10 mm: The rods are packed loose in a wooden box and protected with oiled paper (net weight of approx. 500 kg). Each box is strapped with 4 steel straps to ensure material integrity during shipping. Size range > 10 mm: ASBW machining rods are supplied by standard in bundles either of approximately 1.000 kg or 500 kg. Different bundle weights are also possible upon customer's request. Each bundle is steel strapped three times on cardboard and both ends are protected with litter, to ensure the material integrity during the transportation
Identification	Adhesive label on bundle strap: <ul style="list-style-type: none"> - customer - number of customer's order - EN Standard of the material - ASBW material code and LOT number ensuring production tracking - rod length - ASBW's PO number - ASBW's Quality Approval Seal

The technical information within this datasheet is provided by ASBW without any surcharge.
The end use of this content is up to the user discretion and risk.
For further detailing on technical aspects such as material condition, machining, mechanical data, temper selection through contact to our technical personal.



BARBOSA WORLD BRASS, S.A

Main office and factory: Rua de Sousanil, 476, 4525-100 Canedo VFR, Santa Maria da Feira - Portugal
Phone: +351 227 637 040
Email: asbw@asbw.pt
NIPC: 515 557 552
Social Capital: € 350.000