



.....

Material Datasheet:
CuZn40Pb1
(CW627N)

.....

MACHINING / HOT STAMPING BRASS RODS

CuZn40Pb1

Standard alloy for stamping rods

CuZn40Pb1 This alloy perfectly combines hot stamping and machining properties. With moderate content of lead is suitable for parts that require demanding machining operations after stamping.

It is also perfect for producing parts that only require free machining operations.

MATERIAL DESIGNATION

ASBW	International	EN	UNS	JIS	Further Restrictions
B29	CuZn40Pb1	CW627N	-	-	-

REFERENCE CHEMICAL COMPOSITION IN % (MAIN ELEMENTS)

Material	Cu	Pb	Ni	Fe	As	Sn	Al	Mn	Zn	Other elements
B29	Min. 57,0	0,8	-	-	-	-	-	-	Rem.	≤ 0.2 %
	Máx. 59,0	1,6	0,3	0,3	-	0,3	0,05	-		

FABRICATION PROPERTIES

FORMING

Machinability (CuZn39Pb3 = 100 %)	90 %
Cold Workability	Poor
Hot Workability	Excellent

JOINING

Resistance Welding (Butt Welding)	Fair
Inert Gas Shielded Arc Welding	Not Recommended
Gas Welding (Most Commonly Oxyacetylene)	Not Recommended
Hard Soldering	Fair
Soft Soldering	Excellent
Brazing	Fair

POLISHING

Mechanical	Good
Electrolytic	Poor
Electroplating	Excellent

HEAT TREATMENT

Melting Range	880 – 900 °C
Hot Working	630 – 780 °C
Soft Annealing	420 – 580 °C Duration: 1 – 3 h
Thermal Stress Relieving	160 – 280 °C Duration: 1 – 3 h

PRODUCT STANDARDS

Rod	EN 12164 EN 12165
Section	EN 12167

CORROSION RESISTANCE

Machining brass is quite resistant to organic substances and to neutral or alkaline compounds. In comparison, homogeneous α -brass has a much more satisfactory corrosion resistance due to its microstructure. As for the stress corrosion cracking and dezincification, specially under conditions as warm, acidic waters and ammoniacal atmospheres, they should be taken into consideration, even more when the material is not under a stress relieved condition.

Physical properties*

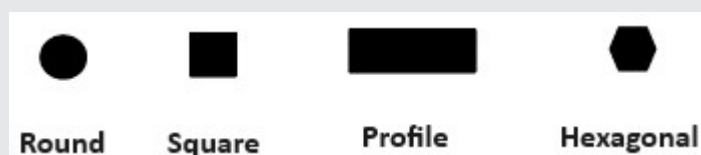
Material Density [g/cm ³]	Electrical Conductivity		Thermal Conductivity [W/(m.K)]	Thermal Expansion Coefficient (0 – 300 °C) [10 ⁻⁶ /K]	Modulus of Elasticity [GPa]
	[MS/m]	[% IACS]			
8,42	14,44	24	115	20,9	97

* Reference values at room temperature

Mechanical properties (indicative values)

Tensile Strength [Rm] (N/mm ²)	Yield Strength [Rp0.2] (N/mm ²)	Elongation (%)	Hardness (HBW)
>300	>100	>20	>80

Production Range/Geometries available



For further information regarding the dimensions, tolerances and temper conditions contact us.

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: customer <ul style="list-style-type: none">- 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 just for information purposes and 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