Material Datasheet:
CW722R

MACHINING / HOT STAMPING BRASS RODS

CW722R

Standard high strength and wear resistance alloy

CW722R is a high tensile strength brass with very good wear resistance. Commonly used for slide bearings, valve guides, pump shafts and construction components in mechanical engineering that requires high mechanical strength and wear resistance.

MATERIAL DESIGNATION

ASBW	International	EN	UNS	JIS	Further Restrictions
B26	CuZn40Mn1Pb1FeSn	CW722R	-	-	-

REFERENCE CHEMICAL COMPOSITION IN % (MAIN ELEMENTS)

Material		Cu	Pb	Ni	Fe	As	Si	Sn	Al	Mn	Zn	Other elements
B26	Min.	56,5	0,8	-	0,2	-	-	0,2	-	0,8	Rem.	≤ 0.3 %
	Máx.	58,5	1,6	0,3	1,2	-	-	1,0	0,1	1,8		

FABRICATION PROPERTIES

FORMING

Machinability (CuZn39Pb3 = 100 %)	80%
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
Soldering	Good
Brazing	Excellent

HEAT TREATMENT

Melting Range	880 – 915 °C
Hot Working	650 – 750 °C
Soft Annealing	480 – 580 °C Duration: 1 – 3 h
Thermal Stress Relieving	300 – 400 °C Duration: 1 – 3 h

PRODUCT STANDARDS

Rod	EN 12164 EN 12165
Section	EN 12167

CORROSION RESISTANCE

This high strength brass is quite resistant to organic substances and to neutral or alkaline compounds due to alloying additions.

Physical properties*

Material Density [g/cm³]	Electrical Conductivity		Thermal Conductivity [W/(m.K)]	Thermal Expansion Coefficient (0 – 300 °C) [10^{-6}/K]	Modulus of Elasticity [GPa]
	[MS/m]	[% IACS]			
8,32	11,0	17	86	20,5	99

* Refence values at room temperature

Mechanical properties

Round rods/polygonal rods — acc. To EN 12164

Temper	Diameter			Width across flats			Tensile strength Rm	Yield strength Rp0.2		Elongation A100	Elongation A11.3	Elongation A	Hardness HB	
	from [mm]	Over [mm]	to [mm]	from [mm]	Over [mm]	to [mm]	Mpa min.	Mpa min.	Mpa max.	[%] min.	[%] min.	[%] min.	min.	max.
M	all			all			as manufactured – without specified mechanical properties							
R440	-	40	80	-	40	60	440	180	–	–	-	20	–	–
H100	-	40	80	-	40	60	–	–	–	–	–	–	100	140
R500	5	-	40	5	-	40	500	270	–	–	10	12	–	–
H130	5	-	40	5	-	40	–	–	–	–	–	–	130	-

Rectangular rods — acc. To EN 12167

Temper	Thickness			Tensile strength Rm	Yield strength Rp0.2		Elongation A100	Elongation A11.3	Elongation A	Hardness HB	
	from [mm]	over	to [mm]	Mpa min.	Mpa min.	Mpa max.	[%] min.	[%] min.	[%] min.	min.	max.
M		all		as manufactured – without specified mechanical properties							
R440	–	10	30	440	180	–	–	16	20	–	–
H100	–	10	30	–	–	–	–	–	–	100	140
R500	3	–	10	500	270	–	5	10	12	–	–
H130	3	–	10	–	–	–	–	–	–	130	-

Rods — acc. to EN 12165

Temper	Diameter		Hardness HB	
	from [mm]	to [mm]	min.	max.
M	all		As manufactured	
H100	8	80	100	160

FINISHING AND PACKAGING

Bar ends	**Marked according to customer's specification**
Bar surface	**Standard machining rods: bright, stripped surface** **Standard stamping rods: 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 costumer'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** **- 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**

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