C23000

MB15 – CuZn15

SUNDWIGER Messingwerk

Material Designation	
DIN-EN Symbol	CuZn15
DIN-EN	CW502L
UNS	C23000
JIS	C2300

Physical Properties		
Electrical conductivity soft	19,7	MS/m
Thermal conductivity	159	W/(m·K)
Thermal expansion coefficient **	18,5	10-6/K
Density	8,8	g/cm³
Modulus of elasticity	122	GPa = kN/mm²

* Reference values at room temperature
** Between 20 and 300 °C

Nominal Composition (mass content in %)	
Cu	Balance
Sn	< 0,05
Zn	15
Ni	< 0,2
Fe	< 0,05
Al	< 0,02
Pb	< 0,005
Other	< 0,1

Typical Applications

- Jewellery
- Metal ware
- Transistor carriers
- Deep drawing parts
- Stamped-bent parts
- Connectors

About The Alloy

MB15 is a red brass having fine gloss, good workability, drawability and corrosion resistance.

Among the Copper Zinc Alloys MB15 exhibits a very high electrical and thermal conductivity as well a high modulus of elasticity. The colour of MB15 is due to the increased Zn content already slightly yellow. Applications are found in buildings, personal accessories, cosmetic cases and in the jewellery industry.

MB15 is an single phase Copper alloy and available in a temper condition which allows extraordinary good cold forming and deep drawing with almost no earring.

The alloy is registered with the U.S. EPA as Antimicrobial and with respect to Pb and Cd meets the OEKO-TEX Standard 100.

Mechanical Properties *)

Temper condition		O30 **R 250** H 55	H01 **R 300** H 85	H02 **R 350** H 105	H03 **R 400** H 120	H04 **R 440** H 140	H06 **R 495** H 160
Tensile strength in N/mm²		250 - 300	300 - 370	350 - 420	400 - 460	440 - 500	> 495
0.2 % yield Strength in N/mm²		< 150	> 200	> 270	> 350	> 390	> 450
Elongation A_{L50} %		> 40	> 25	> 15	> 9	> 6	> 3
Vickers hardness HV		55 - 85	85 - 115	105 - 130	120 - 150	140 - 170	> 160
Electrical conductivity in % IACS		34	34	33	33	32	32
Minimum radius of the bending mandrel for 90° bend and strip thickness s							
0.10 ≤ s ≤ 0.25 mm	transverse parallel	0 x s 0 x s	0 x s 0 x s	0 x s 0 x s	0 x s 0 x s	0 x s 0.5 x s	- -
0.25 < s ≤ 0.50 mm	transverse parallel	0 x s 0 x s	0 x s 0 x s	0 x s 0 x s	0 x s 0.5 x s	0 x s 2 x s	- -

*) Reference values

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Processing Instructions	
Cold forming properties	good
Machinability	sufficient
Electroplating properties	very good
Hot-dip tinning properties	very good
Soldering	very good
Resistance welding	good
Gas shielded arc welding	satisfactory
Laser welding	sufficient

Available Versions
Coils with standard outer diameters of 1200 mm
Strips in reel form with coil weight of up to 1500 kg
Multipancake up to 2.5 t
Hot-dip tinned strips
Profiled strips
Electroplated strips (tin, nickel)

Available Dimensions
Bright pre-rolled strips 1 to 2.5 mm
Precision strip thickness from 0.05 to 1.2 mm
Strip width from 3.0 to 600 mm, but at least 10 times of the strip thickness
Other widths available on request

Your Local Contact Person	
Europe	Asia

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