

## SM328 (C24600)

CuZn28

### Alloy characteristics

SM328 is a brass alloy with excellent cold forming properties and on the other hand with good mechanical strength. Its characteristics are: excellent soldering, welding and brazing properties. This is the first of the higher zinc alloyed material with excellent deep drawing purposes like mechanical lighters and lipsticks. The fastener industry and the electrical industry (for terminals) are other well used sectors.

Main purposes of SM328 are as well in the jewelry industry, watch industry, electronic industry and installation parts. Even in builders hardware we can find this alloy: door knobs, push plates, locks. Grain sizes for deep drawing on request. SM328 is in compliance to the requirements of the OEKO-TEX Standard 100 in terms of the PB and Cd.

### Mechanical properties

### Temper condition

	H00 HV55-90	H01 HV95-155	H02 HV125-155	H03 HV150-190	H04 HV170-210	H05 HV190
Tensile strength in N/mm <sup>2</sup>	270-350	350-430	410-490	480-570	550-640	>630
0,2% yield strength in N/mm <sup>2</sup>	≤160	>170	>260	>430	>480	>560
Vickers hardness HV (ref. only)	55-90	95-155	125-155	150-190	170-210	>190
Elongation A <sub>L50%</sub>	> 40	> 21	> 9	> 4	>2	-
Bendability						
0.10 ≤ s ≤ 0.25 mm	Transverse	0 x t	0 x t	0 x t	-	-
	Parallel	0 x t	0 x t	0 x t	-	-
0.25 < s ≤ 0.5 mm	Transverse	0 x t	0 x t	-	-	-
	Parallel	0 x t	0 x t	-	-	-

### Physical properties (Typical values in annealed temper at 20 °C)

Thermal expansion coefficient 20 ... 300 °C	20	10 <sup>-6</sup> /K
Specific heat capacity	0.377	J/(g·K)
Density	8.55	g/cm <sup>3</sup>
Thermal conductivity	121	W/(m·K)
Thermal coefficient of electrical resistance (0 ... 100 °C)	1.5	10 <sup>-3</sup> /K
Modulus of elasticity ( 1 GPa = 1 kN/mm <sup>2</sup> ) cold formed	115	GPa
Electrical conductivity (IACS)	29-24	%

### Material designation

DIN EN	13388
UNS	C24600

### Chemical composition

Cu	Rest %
Sn	<0.05 %
Zn	28 %
Other	≤ 0.1 %

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