

<b>Description</b>	<b>CuZn36</b>	DIN	EN Nr.	UNS (AMS)	AISI	WCA
		-	CW507L	2700	-	203

### Chemical composition

Zn	Cu	Al	Fe	Ni	Pb	SN	Others
Balance	63.5 – 65.5	≤ 0.02	≤ 0.05	≤ 0.20	≤ 0.05	≤ 0.5	≤ 0.20

Values (Weight %). In order to achieve maximum homogeneity and consistent quality, the actual manufacturing tolerances are tighter and more precisely than the composition indicated.

### Main technical properties and features

The CuZn36 is a lead-free brass alloy containing 64% copper. The microstructure shows an alpha single-phase with a very good behavior for cold formability, polishing, galvanic processes, soft and hard solderability. The brass shows a good resistance to fresh water, neutral or alkaline solutions, organic compounds as well as land, sea, and industrial atmosphere. It is not resistant to acids, hydrous sulfur compounds, hydrous ammonia (stress corrosion cracking) in non-stress-relieved conditions.

### Typical uses

Metal goods, deep drawn parts, stamped and embossed parts, connectors, watch dials.

### Typical manufacturing range

Rolled products		Thickness (mm)	Width (mm)	Length (mm)
Strip in coils <sup>[1]</sup>		0.10 - 1.50	3 - 140	-
Strip as sheets <sup>[1]</sup>		0.10 - 1.50	10 - 140	500 - 3000

<sup>[1]</sup> Not all our production possibilities are presented here. Other dimensions or product forms available upon request. Some combinations of thicknesses and widths are not possible.

### Mechanical properties of strips

Temper			R <sub>p0.2</sub> (N/mm <sup>2</sup> )	R <sub>m</sub> (N/mm <sup>2</sup> )	A <sub>50mm</sub> (%)	Hardness HV
R300	H055	soft	180 max.	300 - 370	38 min.	55 - 95
R350	H095	½ hard	170 min.	350 - 440	19 min.	95 - 125
R410	H120	¾ hard	300 min.	410 - 490	8 min.	120 - 155
R480	H150	hard	430 min.	480 - 560	3 min.	150 - 180
R550	H170	extra-hard	500 min.	550 - 640	-	170 - 200
R630	H190	spring-hard	600 min.	630 min.	-	190 min.

## Physical properties

Modulus of elasticity	kN/mm <sup>2</sup>	215 (soft), 190 (hard), 225 (soft+hardened), 210 (hard+hardened)
Density	g/cm <sup>3</sup>	8.3
Melting point	°C	1450 - 1460
Linear dilatation coefficient	10 <sup>-6</sup> /°C	12.5
Thermal conductivity at 20°C	W/m °K	12.5
Thermal capacity at 20°C	J/kg K	377
Electrical resistivity	μΩcm	6.6
Electrical conductivity at 20°C	MS/m	15 <sup>[1]</sup>
Electrical conductivity at 20°C	% IACS	26 <sup>[1]</sup>
Magnetic properties		Diamagnétique

<sup>[1]</sup> Values for soft temper. The electrical conductivity decreases slightly for higher strain hardening.

## Tolerances (strip and foil)

Thickness	Thickness (mm)		EN Standard		WEBER + CALIBRA		
	≥	<	10140 Precision	10258 Precision	WCA Standard	WCA Precision	WCA Extreme
	-	0.025	-	-	-	-	± 0.001
	0.025	0.050	-	-	± 0.003	± 0.002	± 0.0015
	0.050	0.065	-	± 0.003	± 0.003	± 0.0025	± 0.002
	0.065	0.100	-	± 0.004	± 0.004	± 0.0035	± 0.003
	0.100	0.125	± 0.005	± 0.006	± 0.005	± 0.004	± 0.003
	0.125	0.150	± 0.005	± 0.006	± 0.005	± 0.005	± 0.004
	0.150	0.250	± 0.010	± 0.008	± 0.008	± 0.006	± 0.004
	0.250	0.300	± 0.010	± 0.009	± 0.009	± 0.007	± 0.005
	0.300	0.400	± 0.010	± 0.010	± 0.010	± 0.007	± 0.005
	0.400	0.500	± 0.015	± 0.012	± 0.012	± 0.008	± 0.006
	0.500	0.600	± 0.015	± 0.014	± 0.014	± 0.010	± 0.007
	0.600	0.800	± 0.015	± 0.015	± 0.015	± 0.010	± 0.007
	0.800	1.000	± 0.015	± 0.018	± 0.018	± 0.012	± 0.009
	1.000	1.200	± 0.020	± 0.020	± 0.020	± 0.015	± 0.012
	1.200	1.250	± 0.020	± 0.020	± 0.020	± 0.015	± 0.012
	1.250	1.500	± 0.020	± 0.020	± 0.020	± 0.015	± 0.014

The table shown is an outline of our typical thickness tolerances available. They are tighter than industry standards.

Our "WCA Precision" and "WCA Extreme" tolerances are available upon request.

## Width

Our width tolerances "Standard" is +0.2, -0.0 (or ± 0.1 mm upon request). They are available for slit widths < 125 mm and thicknesses < 1.00 mm. Special tolerances upon request.

**Camber**

Our tolerance "WCA Standard" respects the EN Standard 1654 (Length of measurement 1000 mm). Other tolerances upon request.

Width (mm)		Camber max. (mm/m)			
		WCA Standard		WCA Extreme	
>	≤	≤ 0.5 mm	> 0.5 mm	≤ 0.5 mm	> 0.5 mm
3	6	12	-	6	-
6	10	8	10	4	5
10	20	4	6	2	3
20	250	2	3	1	1.5

**Surface**

Special surface qualities upon request

**Flatness**

Special requirements on the longitudinal or transversal flatness upon request

