

Datasheet: EN CuZn37 / CW508L Classic Brass Tubes Alumeco ApS 16-01-2025				Internal alloy name: CW508L Metal: Brass Chemical Symbol: CuZn37 EN: EN CuZn37 UNS: C27200 SIS: SS 5150 GB: - JIS: C2720 Also known as: MS 63 / Messing 63 / 1063 Alloy type: Classic Brass			
Main usage: - Electrical components - Industrial applications - Faucets and other bathroom appliances - Fasteners, clamps and switch contacts - Metals goods – signs, lamps, pipes, and hoses - Instruments				Important norms and literature: General Standards EN 1652:1998: Copper and copper alloys – Plate, sheet, strip and circles for general purposes Geometric Tolerance: EN 12449:1999: Copper and copper alloys – Seamless, round tubes for general purposes			
Main properties: - Great formability properties - Good corrosion resistance against atmospheric and certain fluids - Good welding and soldering properties							
Chemical composition in %: EN 1652:1998							
Cu	Al	Fe	Ni	Pb	Sn	Zn	Others
62,0 – 64,0	Max. 0,05	Max. 0,1	Max. 0,3	Max. 0,1	Max. 01	Remaining	Max. 0,1
Mechanical properties: EN 1652:1998							
Material Condition	Thickness range	Rm MPa	Rp0,2 MPa	A50mm for thickness up to 2,5 mm	A for thickness up to 2,5 mm	Hardness HBW	Hardness HV
	mm	(Min. – Max.)		%	%		
R350	0,2 – 5	350 – 440	Min. 170	19	28	-	-
R410	0,2 – 5	410 – 490	Min. 300	8	12	-	-
R480	0,2 – 2	480 – 560	Min. 430	3	-	-	-
R550	0,2 – 2	Min. 550	Min. 500	-	-	-	-
* Information values only;							
Physical properties:							
Density (20 °C)	Solidification range	Electrical conductivity	Thermal conductivity (20 °C)	Thermal expansion (20 - 300 °C)	Annealing temperature	E – modulus (20 °C)	
g/cm³	°C	%IACS	W/m K	µm m ⁻¹ K ⁻¹	°C	N / mm²	
8,44	916	26	120	20,4	450 - 650	110000	
Properties and information's (3 Excellent; 2 Good; 1 Poor/not recommendable)							
Machinability (Zerspanbarkeitsindex): 35* *(CuZn39Pb3 = 100)		Joining Methods: Soldering: 3 Brazing: 3 Oxy-acetylene welding: 1 Gas-shielded arc welding: 2 TIG welding: 1-2 MIG welding: 1-2 Gluing/adhesion: 2			Surface Treatment: Polishing: Mechanical: 3 Electrolytic/chemical: 2 Galvanizing: 3 Hot Dipping: 3		
Forming Methods: Hot Formability: 2 Cold Formability: 3							
Corrosion resistance: Atmosphere: 2 Waters and alkaline: 2 Acids, Ammonia, Seawater etc.: 1							

Tolerances for Tubes of CW508L

Dimensions: EN 12449:1999*

Tolerances on diameter

Nominal diameter d (mm)	Tolerances on nominal diameter (mm)	
	Applicable to mean diameter	Applicable to any diameter including deviation from circular form for straight lengths
$3 \leq d \leq 10$	$\pm 0,06$	$\pm 0,12$
$10 < d \leq 20$	$\pm 0,08$	$\pm 0,16$
$20 \leq d \leq 30$	$\pm 0,12$	$\pm 0,24$
$30 \leq d \leq 50$	$\pm 0,15$	$\pm 0,30$
$50 \leq d \leq 100$	$\pm 0,20$	$\pm 0,50$
$100 \leq d \leq 200$	$\pm 0,50$	$\pm 1,00$
$200 \leq d \leq 300$	$\pm 0,75$	$\pm 1,50$
$300 \leq d \leq 450$	$\pm 1,00$	$\pm 2,00$

* Values are referred from Table 16 of EN 12449:1999

Dimensions: EN 12449:1999*

Tolerances on wall thickness

Nominal outside diameter D (mm)	Tolerances on nominal wall thickness t (mm)				
	$0,3 \leq t \leq 1$	$1 < t \leq 3$	$3 < t \leq 6$	$6 < t \leq 10$	$10 < t$
$3 \leq D \leq 40$	± 15	± 13	± 11	± 10	-
$40 < D \leq 120$	± 15	± 13	± 12	± 11	± 10
$120 \leq D \leq 250$	-	± 13	± 13	± 12	± 11
$250 \leq D \leq 450$	-	-	± 15	± 15	± 15

* Values are referred from Table 17 of EN 12449:1999

Dimensions: EN 12449:1999*

Tolerances on fixed lengths, tubes in straight lengths

Nominal outside diameter D (mm)	Tolerance on fixed length l (mm)			
	$l \leq 250$	$250 < l \leq 1000$	$1000 < l \leq 4000$	$4000 < l$
$3 \leq D \leq 25$	+1 0	+3 0	+5 0	By agreement
$25 < D \leq 100$	+2 0	+5 0	+7 0	
$100 < D \leq 450$	+3 0	+5 0	+10 0	

* Values are referred from Table 18 of EN 12449:1999

Dimensions: EN 12449:1999*

Tolerances on fixed lengths, tube in coils (not level wound)

Specified length L (m)	Tolerance %
$L \leq 50$	+2 0
$50 < L \leq 100$	+3 0
$100 < L$	+5 0

* Values are referred from Table 19 of EN 12449:1999

Dimensions: EN 12449:1999*

Tolerances on diameter including deviation from circular form, tube in coils

Nominal outside diameter D (mm)	Tolerances on nominal diameter including deviation from circular form	Applicable for coil inside diameter min.
$3 \leq D \leq 6$	$\pm 0,30$	400
$6 < D \leq 10$	$\pm 0,50$	600
$10 \leq D \leq 20$	$\pm 0,70$	800
$20 \leq D \leq 30$	$\pm 0,90$	1000

* Values are referred from Table 20 of EN 12449:1999

Dimensions: EN 12449:1999*
Tolerances on straightness

Ratio of	Depth of arc (see Figure 1)	
	h_1 in any length l_1 of 1000 mm max.	h_2 in any length l_2 of 400 mm max.
$r \leq 5$	2	0,8
$5 < r \leq 10$	3	1,2
$10 < r \leq 20$	4	1,6
$20 < r \leq 40$	5	2,0
$40 < r$	6	2,5

* Values are referred from Table 21 of EN 12449:1999

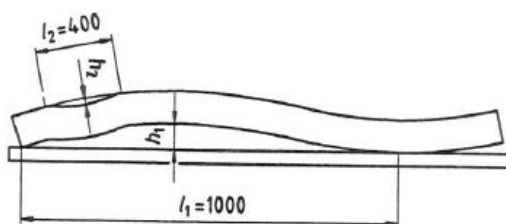


Figure 1 - Measurement of straightness from EN 12449:1999

Dimensions: EN 12449:1999*
Sampling rate

Mass per unit length kg/m	Size of inspection lot for one test sample kg
$\bar{\lambda}_m \leq 0,25$	≤ 500
$0,25 < \bar{\lambda}_m \leq 5$	≤ 1000
$5 < \bar{\lambda}_m$	≤ 2500

* Values are referred from Table 22 of EN 12449:1999