

C27000

3.5. CuZn36

Alloy Designation

EN	CuZn36
DIN CEN/TS 13388	CW507L
UNS	C27000

Chemical Composition (Balance)

Weight percentage

Cu	64	%
Zn	Rest	%

Characteristics

CuZn36 is the major brass alloy for the cold forming process. Even though brasses with lower Zinc content have better cold forming properties, **CuZn36** is the most used alloy. Reasons for this are on the one hand economical due to lower price of Zinc compared to Copper, on the other hand the forming properties of this alloy meet the demand of many applications.

Main Applications

Metal goods, Deep drawn parts, Stamped parts, Connectors.

Mechanical Properties (EN 1652)

Temper	Tensile Strength	Yield Strength Minimum	Elongation Minimum	Hardness	Bending 90°	
	Rm	Rp0.2	A _{50mm}	HV *	gw rel. Bending Radius R/T	bw
	MPa	MPa	%	HV	Strip Thickness ≤ 0.50mm	
R300	300 .. 370	≤ 180 *	38	55 .. 105	0	0
R350	350 .. 430	170 *	19	95 .. 125	0	0
R410	410 .. 490	300 *	8	120 .. 155	0	0
R480	480 .. 560	430 *	3	150 .. 180	0,5	2
R550	≥ 550	500 *	-	≥ 170	1	3
R630	≥ 630	600 *	-	≥ 190	-	-

* only for information

Physical Properties

Typical values in annealed temper at 20 °C

Density		8.47	g/cm ³
Thermal expansion coefficient	20 .. 300 °C	20.2	10 ⁻⁶ /K
Specific heat capacity		0.377	J/(g·K)
Thermal conductivity		121	W/(m·K)
Electrical conductivity	MS/m	14	MS/m
Electrical conductivity	IACS	24	%
Thermal coefficient of electrical resistance	(0 .. 100 °C)	1.7	10 ⁻³ /K
Modulus of elasticity	GPa	110	GPa

Fabrication Properties *

Cold Forming Properties	Excellent
Machinability (Rating 20)	Fair
Electroplating Properties	Excellent
Hot Tinning Properties	Excellent
Soft Soldering, Brazing	Excellent
Resistance Welding	Good
Gas Shielded Arc Welding	Fair
Laser Welding	Less suitable

* For more details call our technical service

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