

CuZn35

CuZn35 | C26800

The alloy has good cold workability and is economically attractive due to its high zinc content. CuZn35 can be soldered and welded. Its application areas include the electronics industry, fasteners, machine components, and the automotive sector.

Comparable Standards

EN	UNS
CW507L	C27000

Chemical Composition %

Cu	Zn	Ni	Sn	Fe	Pb
64 - 66	rem	0.1 max	0.5 max	0.05 max	0.05 max

Physical Properties

Melting Point	920	[°C]
Density	8.45	(g/cm ³)
Cp @ 20°C	0.377	[kJ/kgK]
Modules of Elasticity	110	[GPa]
Electrical Conductivity	≥14	%IACS
Electrical Conductivity [W/mK]	121	%
α @ 20°C	20.2	[10 ⁻⁶ /K]

Note: The specified conductivity applies to the soft condition only.

Cp specific heat

α thermal expansion coefficient

Fabrication Properties

Cold Formability	excellent
Hot Formability	not recommended
Soldering ability	excellent
Oxyacetylene welding	good
Gas shield arc welding	fair
Resistance welding	good
Machining	fair
Brazing	excellent

Electrical Conductivity

Electrical conductivity depends on chemical composition, level of cold deformation, and grain size. High levels of deformation and small grain size reduce conductivity.

Typcial Uses

Lamp fittings, reflectors, pins, rivets, rings, screws, springs, chains, radiators.

Corrosion Resistance

Brass is resistant to natural, industrial, and salt-containing environments, potable water, and alkaline/neutral saline solutions. Brass has low corrosion resistance in acids, ammonia, halogens, cyanide and hydrogen sulfide solutions/atmospheres, as well as in seawater (especially under high flow rates).

Under specific conditions (high Cl content and low carbonate hardness), dezincification can be an issue in alloys containing beta phase. The alloy also exhibits certain susceptibility to stress corrosion cracking when exposed to specific environments (e.g., ammonia, amines, or ammonium salts). If stress corrosion cracking poses a risk, the alloy must be stress-relieved.

Mechanical Properties

	Tensile Strength [MPa]	Yield Strength [MPa]	Elongation A50 [%]	Hardness HV [-]	Bend ratio 90° [r]	
					GW	BW
R285	285-340	≤ 180	≥ 45	65-85	0	0
R340	340-385	≥ 180	≥ 35	75-110	0	0
R385	385-460	≥ 300	≥ 20	110-135	0	0
R460	460-525	≥ 350	≥ 5	135-165	0.5	1
R525	525-670	≥ 450	-	≥ 165	1	2
R670	≥ 670	≥ 600	-	≥ 185	1	2

Other tempers are available upon request.

$r = x * t$ (thickness $t \leq 0.5\text{mm}$)

GW bend axis transverse to rolling direction. BW bend axis parallel to rolling direction.

Dimensional Specifications

Thickness (mm)	Width (mm)
0.04-0.20	10-380
0.21-1.00	5-380
1.01-4.00	15-400
4.01-8.00	25-400