

C27400 (CuZn37)

18 08 US

Comparable standards: UNS C272/400 • EN CW508L • JIS C2720
 Aurubis designations: C272/C274 • PNA243 • SM1063

Description CuZn37 is a solid solution strengthened copper alloy (brass) with around 37 % zinc. Cold worked CuZn37 may be susceptible to stress - corrosion cracking in certain media as ammonia or its compounds, mercury or its compounds. A stress-relief anneal can be utilized to minimize this susceptibility. Exposure to acidic media may result in dezincification.

Composition

Cu	Fe	Ni	Pb	Zn
[%]	[%]	[%]	[%]	[%]
62.0 - 64.0	0.05 max	0.3 max	0.05 max	rem.

Physical properties

Melting point	Density	Specific heat cap. at 20°C	Electrical cond.	Thermal cond. at 20°C	Mod. of elasticity	Coef. of therm exp. at 20°C
[°F] [°C]	[lb/in ³] [g/cm ³]	[Btu/lb°F] [kJ/kgK]	[%IACS] [MS/m]	[Btu/ft h °F] [W/mK]	x1000 ksi [GPa]	[10 ⁻⁶ /°F] [10 ⁻⁶ /K]
1688 920	0.305 8.44	0.09 0.377	27 15.8	67 116	16 110	11.4 20.5

The specified conductivity applies to the soft condition only

Mechanical properties

Temper	Tensile strength Rm [ksi] [MPa]	Yield strength Rp0.2 min [ksi] [MPa]	Elongation 2" min [%]	Hard-ness HV Info only [-]	min bend ratio 90°		min. bend ratio 180°	
					GW	BW	GW	BW
Soft	43-53 300-370	26 179	38	55-95	0	0	0	0
H02	53-64 370-440	29 200	19	100-130	0	0	0	0
H03	59-71 410-490	43 300	8	120-155	0	0.5	0	0.5
H04	64-78 440-540	53 370	6	130-165	0.5	1.5	0.5	1.5
H06	78-88 540-610	71 490	2	165-195	1	3	1	3
H08	> 88 > 610	84 580	1	≥ 185	2	7	2	7

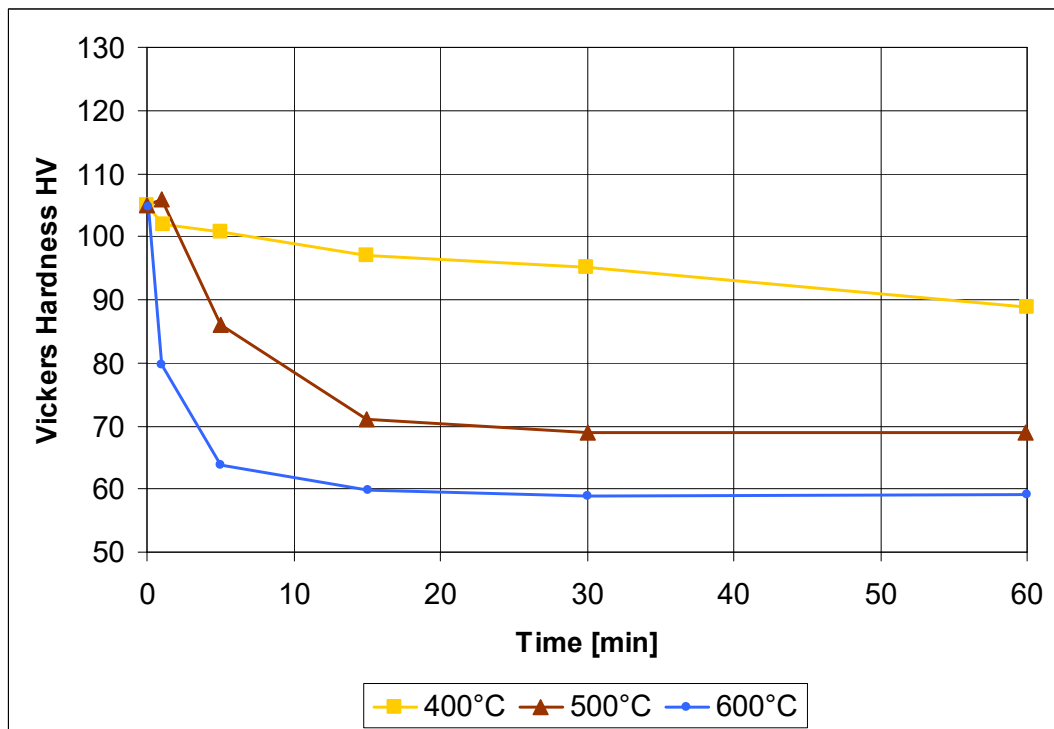
Other tempers are available upon request.
 GW bend axis transverse to rolling direction. BW bend axis parallel to rolling direction

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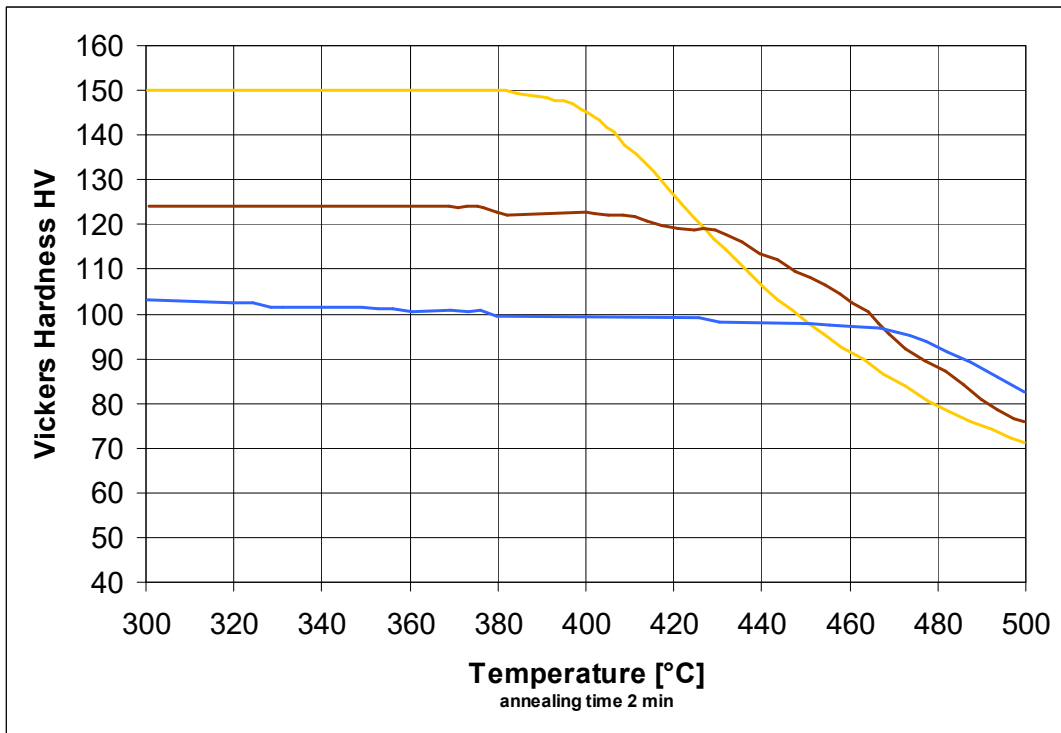
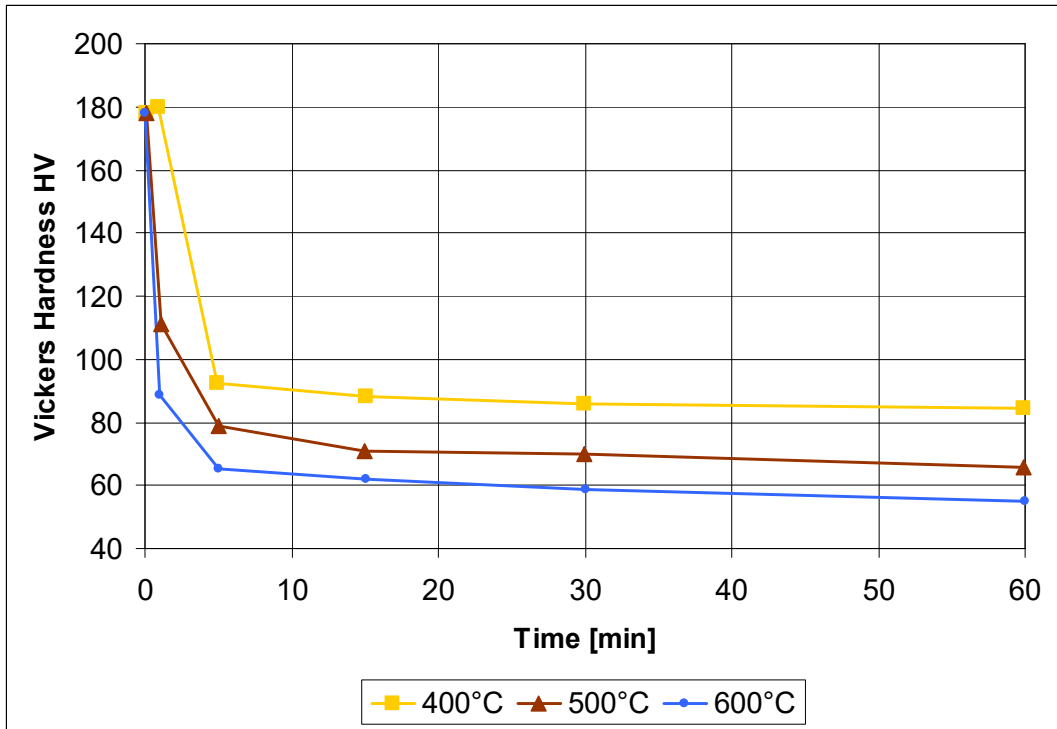
Fabrication properties

Cold formability	excellent
Hot formability	poor
Soldering	excellent
Brazing	excellent
Oxyacetylene welding	fair
Gas shielded arc welding	fair
Resistance welding	good

Softening resistance



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Annealing time 2 min.
 Temperatures at 1 min annealing time will be 10 degrees **higher**.
 Temperatures at 4 min annealing time will be 10 degrees **lower**.

Typical uses

Electric connectors, brackets, clips & contacts; radiator cores & tanks; hollowware base metal; lamps; bowls; trays; flashlight socket shells; grommets; eyelets; fasteners; bead chain.

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