

CuZn30

Revision 13 05 EU

Comparable standards: EN CW505L • UNS C26000 • JIS C2600
 Aurubis designations: PNA226 • C260 • SM1070

Description

CuZn30 is solid solution strengthened copper alloy (brass) with 30% zinc. As the zinc content increases in the alloy, the strength improves, but is accompanied by losses in conductivity.

Moreover, it should be noted that as the zinc content rises, the inclination to stress corrosion cracking increases in the event of exposure to an ammoniacal atmosphere. This type of corrosion can, however, be combated in many cases by the removal of thermal stress.

As the zinc content rises, the user may under certain circumstances have an economic advantage due to the different metal values.

Composition


Cu [%]	Fe [%]	Pb [%]	Zn [%]
69.2 – 70.0	0.050 max	0.050 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
[°C]	[g/cm³]	[kJ/kgK]	[MS/m]	[W/mK]	[GPa]	[10 ⁻⁶ /K]
954	8.53	0.377	16.4	121	110	20.0

The specified conductivity applies to the soft condition only

Mechanical properties

	Tensile strength Rm	Yield strength Rp0.2 min	Elongation A50 min	Hardness HV	min bend ratio 90°		min. bend ratio 180°	
					GW	BW	GW	BW
	[MPa]	[MPa]	[%]	[-]				
G010	(410)	(210)	40	< 120	0.0	0.0	0.0	0.0
G020	(360)	(150)	40	< 95	0.0	0.0	0.0	0.0
G030	(340)	(130)	40	< 90	0.0	0.0	0.0	0.0
G050	(330)	(110)	40	< 80	0.0	0.0	0.0	0.0
G075	(310)	(90)	50	< 70	0.0	0.0	0.0	0.0
 R270	270-320	< 160	40	55-90	0.0	0.0	0.0	0.0
R350	350-430	> 170	21	95-125	0.0	0.0	0.0	0.0
R410	410-490	> 260	9	120-155	0.0	1.0		
R480	480-570	> 430	4	150-190	0.5	2.0		
R550	550-640	> 480	2	170-210	1.0	3.0		
R630	> 630	> 560	-	> 190				

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

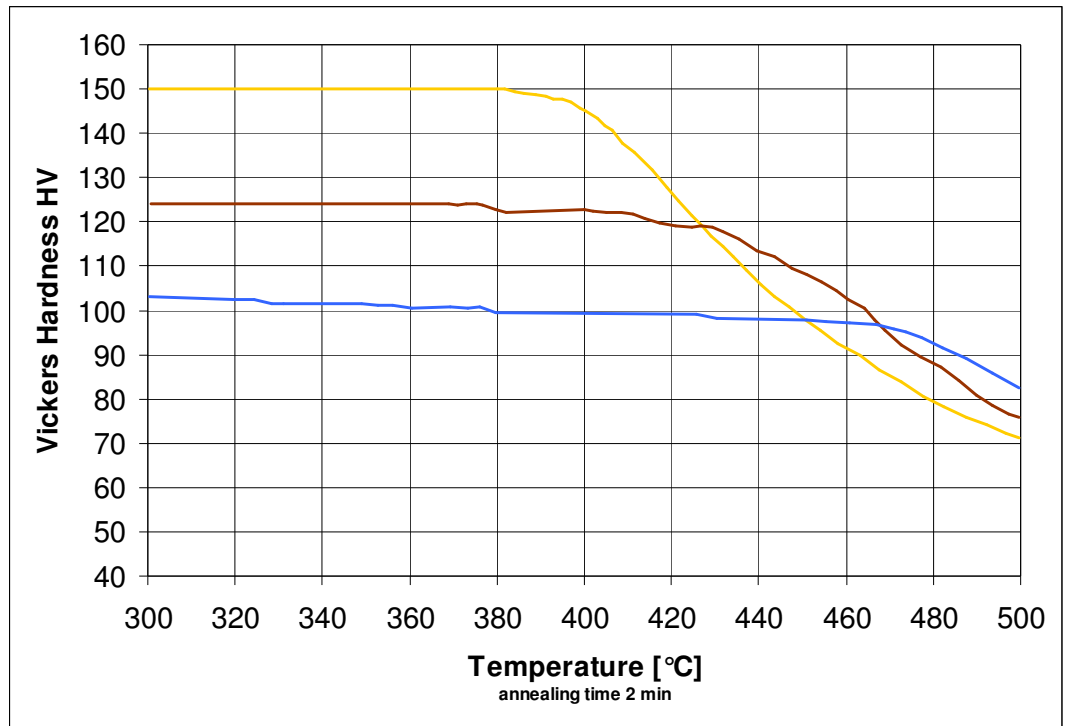
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Fabrication properties

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

Heat Resistance and Softening Characteristics



Annealing time 2 min.

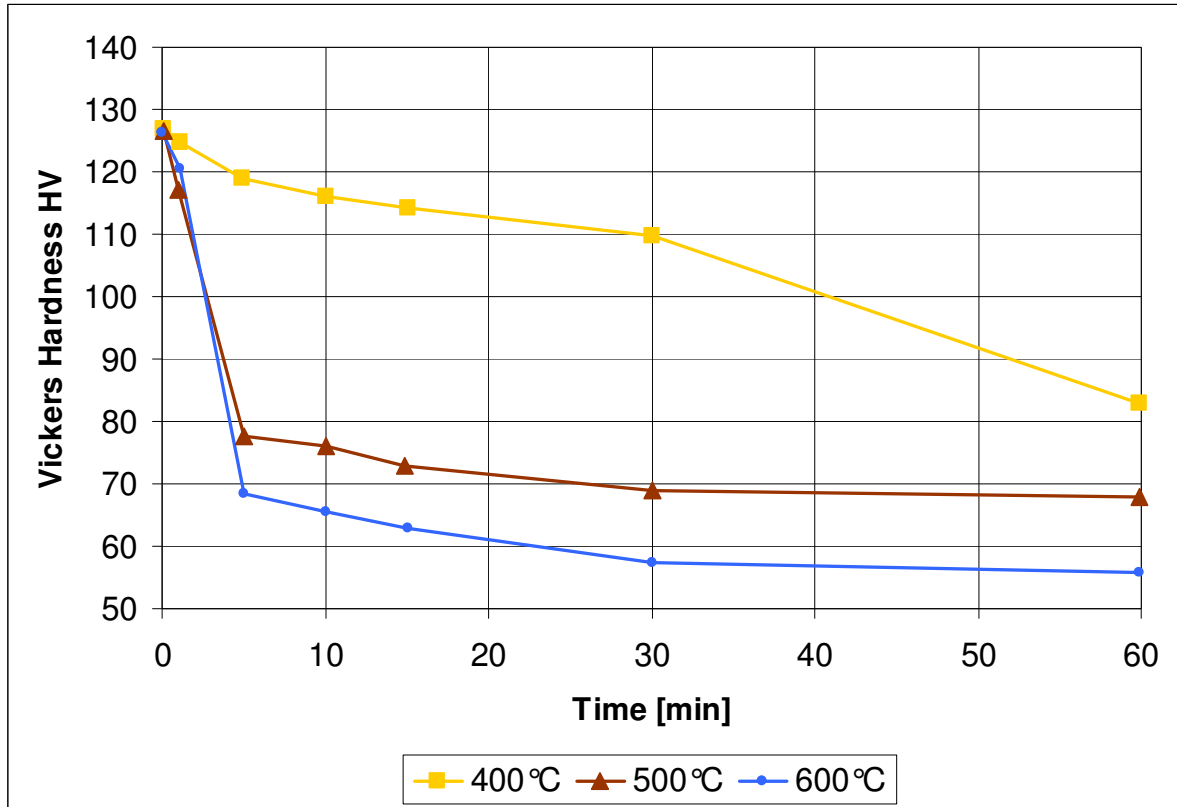
Temperatures at 1 min annealing time will be 10 degrees **higher**.
 Temperatures at 4 min annealing time will be 10 degrees **lower**.

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Softening stability

Vickers hardness after heat treatment.
(Temper R410, typical values)



Typical uses

Automotive, Components of electrical engineering, Ordnance, Connectors, Cases, Chains, Heat exchangers, Coolers, Springs

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