



# Application Datasheet

## Standard Designation for Wrought Copper Alloys

Revision Date: November 13, 2018

### Copper-Nickel Alloys (C70000 - C73499)

\* = are alloys registered with the U.S. EPA as Antimicrobial.

UNS #	Cu		Pb		Sn		Zn		Fe		Ni		Mn		Other Named Elements		Status
	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	
C70100*		Rem <sup>(1)(2)</sup>						0.25		0.05	3.0 <sup>(3)</sup>	4.0		0.50			active
C70200*		Rem <sup>(1)(2)</sup>		0.05						0.10	2.0 <sup>(3)</sup>	3.0		0.40			active
C70230*		Rem <sup>(2)(1)</sup>			0.10	0.50	0.50	2.0			2.2	3.2			0.40 Si	0.10 Ag <sup>(4)</sup> 0.8 Si	active
C70240*		Rem <sup>(2)(1)</sup>		0.05			0.30	0.8		0.10	1.0	4.0 <sup>(3)</sup>	0.01	0.20	0.01 Ag 0.40 Si	0.10 Ag 0.8 Si	active
C70250*		Rem <sup>(1)(2)</sup>		0.05				1.0		0.20	2.2	4.2 <sup>(3)</sup>		0.10	0.05 Mg 0.25 Si	0.30 Mg 1.2 Si	active
C70252* Copper Nickel NKC 388		Rem <sup>(2)(1)</sup>		0.05				1.0		0.20	3.0 <sup>(3)</sup>	4.2	0.11	0.20	0.05 Mg 0.40 Si	0.30 Mg 1.2 Si	active
C70260*		Rem <sup>(1)(2)</sup>									1.0 <sup>(3)</sup>	3.0			0.20 Si	0.01 P 0.7 Si	active
C70265*		Rem <sup>(2)(1)</sup>		0.05	0.05	0.8		0.30			1.0	3.0 <sup>(3)</sup>			0.20 Si	0.01 P 0.7 Si	active
C70270*		Rem <sup>(2)(1)</sup>		0.05	0.10	1.0		1.0	0.28	1.0	1.0	3.0 <sup>(3)</sup>		0.15	0.20 Si	1.0 Si	active
C70275* Copper Nickel Alloy MAX126		Rem <sup>(1)(2)</sup>		0.01	0.30	1.0	0.30	1.0		0.25	0.50	1.5			0.002 Mg 0.10 Si	0.01 Ca 0.06 Cr 0.20 Mg 0.50 Si	active
C70280*		Rem <sup>(1)(2)</sup>		0.02	1.0	1.5		0.30		0.015	1.3 <sup>(3)</sup>	1.7			0.02 P 0.22 Si	0.04 P 0.30 Si	active
C70290*		Rem <sup>(2)(1)</sup>		0.02	2.1	2.7		0.30		0.015	1.3 <sup>(3)</sup>	1.7			0.02 P 0.22 Si	0.04 P 0.30 Si	active

UNS #	Cu		Pb		Sn		Zn		Fe		Ni		Mn		Other Named Elements		Status	
	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%		
C70300* Copper Nickel Alloy		Rem <sup>(1)</sup>							0.05	4.7	5.7		0.05				inactive 07/74	
C70310*		Rem <sup>(1)(2)</sup>		0.05		1.0		2.0	0.10	1.0	4.0 <sup>(3)</sup>			0.02 Ag 0.08 Si 0.005 Zr	0.05 P 0.50 Ag 0.10 Mg 1.0 Si 0.05 Zr		active	
C70315 STOL 94		Rem <sup>(2)</sup>		0.05		1.0		2.0	0.10	1.0	4.0			0.08 Si	0.05 P 0.50 Ag 0.20 Mg 1.0 Si		active	
C70320 Copper Nickel		Rem <sup>(1)</sup>									2.5 <sup>(3)</sup>	5.0		0.20 Al 0.18 Cr 0.20 Si	1.2 Al 0.50 Cr 1.2 Si		inactive 03/92	
C70350*		Rem <sup>(2)</sup>		0.05				1.0	0.20	1.0	2.5		0.20	1.0 Co 0.50 Si	2.0 Co 0.15 Mg 1.2 Si		active	
C70370*		Rem <sup>(2)(1)</sup>		0.05				1.0	0.20	1.0	2.0		0.20	0.20 Ag 1.0 Co 0.50 Si	0.70 Ag 2.0 Co 0.04 Mg 1.0 Si		active	
C70400* Copper-Nickel, 5%		Rem <sup>(1)(2)</sup>		0.05				1.0	1.3	1.7	4.8 <sup>(3)</sup>	6.2	0.30	0.8				active
C70440 95/5 Copper-Nickel		Rem <sup>(1)(2)</sup>		0.05				1.0	1.0	1.8	4.5 <sup>(3)</sup>	6.0	1.0	1.5	0.35 Si	0.05 C 0.05 S 0.45 Si		inactive 03/92
C70500* Copper-Nickel, 7%		Rem <sup>(2)(1)</sup>		0.05				0.20	0.10		5.8 <sup>(3)</sup>	7.8		0.15				active
C70600* Copper-Nickel, 10%		Rem <sup>(2)(1)</sup>		0.05				1.0	1.0	1.8	9.0	11.0 <sup>(3)</sup>		1.0				active
C70610*		Rem <sup>(1)(2)</sup>		0.01					1.0	2.0	10.0 <sup>(3)</sup>	11.0	0.50	1.0			0.05 C 0.05 S	active
C70620*	86.5 <sup>(1)(2)</sup>			0.02				0.50	1.0	1.8	9.0	11.0 <sup>(3)</sup>		1.0			0.02 P 0.05 C 0.02 S	active
C70690*		Rem <sup>(1)(5)(2)</sup>		0.001				0.001		0.005	9.0 <sup>(3)</sup>	11.0		0.001			0.02 C	active
C70700*		Rem <sup>(1)(2)</sup>							0.05		9.5	10.5 <sup>(3)</sup>		0.50				active
C70800* Copper-Nickel, 11%		Rem <sup>(1)(2)</sup>		0.05				0.20	0.10		10.5 <sup>(3)</sup>	12.5		0.15				active
C70900* Copper Nickel		Rem <sup>(1)</sup>		0.05				1.0	0.6		13.5 <sup>(3)</sup>	16.5		0.6				inactive 03/92

UNS #	Cu		Pb		Sn		Zn		Fe		Ni		Mn		Other Named Elements		Status
	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	
C71000* Copper-Nickel, 20%		Rem <sup>(2)(1)</sup>		0.05				1.0		1.0	19.0 <sup>(3)</sup>	23.0		1.0			active
C71100*		Rem <sup>(1)(2)</sup>		0.05				0.20		0.10	22.0 <sup>(3)</sup>	24.0		0.15			active
C71110* Copper Nickel		Rem <sup>(1)</sup>									21.5 <sup>(3)</sup>	23.5		0.35		0.008 S 0.05 Ti	inactive 03/92
C71300*		Rem <sup>(1)(2)</sup>		0.05				1.0		0.20	23.5 <sup>(3)</sup>	26.5		1.0			active
C71500* Copper-Nickel, 30%		Rem <sup>(2)(1)</sup>		0.05				1.0	0.40	1.0	29.0	33.0 <sup>(3)</sup>		1.0			active
C71520*	65.0 <sup>(1)(2)</sup>			0.02				0.50	0.40	1.0	29.0 <sup>(3)</sup>	33.0		1.0		0.02 P 0.05 C 0.02 S	active
C71580*		Rem <sup>(6)(1)(2)</sup>		0.05				0.05		0.50	29.0 <sup>(3)</sup>	33.0		0.30		0.07 C	active
C71581*		Rem <sup>(7)(2)(1)</sup>		0.02					0.40	0.7	29.0 <sup>(3)</sup>	32.0		1.0			active
C71590*		Rem <sup>(5)(1)</sup>		0.001		0.001		0.001		0.15	29.0 <sup>(3)</sup>	31.0		0.50		0.02 C	active
C71600* Copper Nickel Alloy		Rem <sup>(1)</sup>		0.05				1.0	4.8	5.8	29.0 <sup>(3)</sup>	33.0		1.0			inactive 05/71
C71630* Copper Nickel		Rem <sup>(1)</sup>		0.01					0.40	1.0	30.0 <sup>(3)</sup>	32.0	0.50	1.5		0.06 C 0.08 S	inactive 03/92
C71640*		Rem <sup>(2)(8)(1)</sup>		0.05 <sup>(8)</sup>				1.0 <sup>(8)</sup>	1.7	2.3	29.0 <sup>(3)</sup>	32.0	1.5	2.5		0.06 C 0.03 S	active
C71700*		Rem <sup>(1)(2)</sup>						1.0	0.40	1.0	29.0 <sup>(3)</sup>	33.0		1.0	0.30 Be	0.7 Be	active
C71900		Rem <sup>(1)(2)</sup>		0.015				0.05		0.50	28.0 <sup>(3)</sup>	33.0	0.20	1.0	2.2 Cr 0.01 Ti 0.02 Zr	0.02 P 0.04 C 3.0 Cr 0.015 S 0.25 Si 0.20 Ti 0.35 Zr	active
C71950		Rem <sup>(9)</sup>		0.005					0.5	1.0	29.0	32.0	0.5	1.0	1.6 Cr 0.20 Si 0.03 Ti 0.05 Zr	0.005 P 0.001 B 0.001 Bi 0.020 C 0.050 Co 2.0 Cr 0.005 S 0.40 Si 0.15 Ti 0.15 Zr	active
C72000 Copper-Nickel Alloy		Rem <sup>(1)</sup>		0.05				0.30	1.5	2.5	40.0	43.0 <sup>(3)</sup>	0.8	1.7			inactive 02/71

UNS #	Cu		Pb		Sn		Zn		Fe		Ni		Mn		Other Named Elements		Status
	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	Min%	Max%	
C72150		Rem <sup>(1)(2)</sup>		0.05				0.20		0.10	43.0 <sup>(3)</sup>	46.0		0.05		0.10 C 0.50 Si	active
C72200		Rem <sup>(1)(8)(10)</sup>		0.05 <sup>(8)</sup>				1.0 <sup>(8)</sup>	0.50	1.0	15.0 <sup>(3)</sup>	18.0		1.0	0.30 Cr	0.7 Cr 0.03 Si 0.03 Ti	active
C72400 Copper Nickel		Rem <sup>(1)</sup>		0.05		0.05		0.50		0.10	11.0	15.0 <sup>(3)</sup>		1.0	1.5 Al 0.05 Mg	2.5 Al 0.40 Mg 1.0 Hg	inactive 03/92
C72420		Rem <sup>(1)(11)</sup>		0.02		0.10		0.20	0.7	1.2	13.5 <sup>(3)</sup>	16.5	3.5	5.5	1.0 Al	0.01 P 2.0 Al 0.05 C 0.50 Cr 0.05 Mg 0.15 S 0.15 Si	active
C72500*		Rem <sup>(10)(1)</sup>		0.05	1.8	2.8		0.50		0.6	8.5 <sup>(3)</sup>	10.5		0.20			active
C72600* Copper Nickel	91.0	93.0 <sup>(11)(1)</sup>			3.5	4.5		0.50		0.20	3.5 <sup>(3)</sup>	4.5		0.20		0.05 P	inactive 03/92
C72650*		Rem <sup>(11)(1)</sup>		0.01	4.5	5.5		0.10		0.10	7.0 <sup>(3)</sup>	8.0		0.10			active
C72660*		Rem <sup>(2)</sup>		.02	4.5	5.5		.50		.50	7.0	8.0 <sup>(12)</sup>	.05	.30		.15 Mg	active
C72700*		Rem <sup>(11)(1)</sup>		0.02 <sup>(13)</sup>	5.5	6.5		0.50		0.50	8.5	9.5 <sup>(3)</sup>	0.05	0.30		0.15 Mg 0.10 Nb	active
C72800*		Rem <sup>(11)(1)</sup>		0.005	7.5	8.5		1.0		0.50	9.5 <sup>(3)</sup>	10.5	0.05	0.30	0.005 Mg 0.10 Nb	0.005 P 0.10 Al 0.001 B 0.001 Bi 0.15 Mg 0.0025 S 0.02 Sb 0.05 Si 0.01 Ti 0.30 Nb	active
C72900*		Rem <sup>(11)(1)</sup>		0.02 <sup>(13)</sup>	7.5	8.5		0.50		0.50	14.5	15.5 <sup>(3)</sup>		0.30		0.15 Mg 0.10 Nb	active
C72950*		Rem <sup>(11)(1)</sup>		0.05	4.5	5.7				0.6	20.0 <sup>(3)</sup>	22.0		0.6			active
C73100* Copper Zinc Nickel Alloy		Rem <sup>(1)(2)</sup>		0.05		0.10	18.0	22.0		0.10	4.0	6.0		0.50			active
C73150 Copper Nickel		Rem <sup>(1)</sup>		0.10			9.0	15.0		0.25	4.0	7.0		0.50			inactive 03/92
C73200* Copper Nickel		Rem <sup>(1)</sup>		0.05			3.0	6.0		0.6	19.0	23.0		1.0			inactive 03/92

\* = are alloys registered with the U.S. EPA as Antimicrobial.

(1) = Cu value includes Ag.

(2) = Cu + Sum of Named Elements 99.5% min.

(3) = Ni value includes Co.

(4) = Ag Includes B

(5) = The following additional maximum limits shall apply: Si 0.015% S 0.003% Al 0.002% P 0.001% Hg 0.0005% Ti 0.001% Sb 0.001% As 0.001% Bi 0.001% Co 0.05% Mg 0.10% and Oxygen 0.005% Oxygen. For C70690, Co shall be 0.02% max.

(6) = The following additional maximum limits shall apply: Si 0.15% S 0.024% Al 0.05% and P 0.03%.

(7) = Includes P 0.02% max.; Si 0.25% max.; S 0.01% max.; Ti 0.02 - 0.50%.

(8) = The following additional maximum limits shall apply: When the product is for subsequent welding applications and is so specified by the purchaser Zn 0.50% P 0.02% Pb 0.02% S 0.02% (0.008% S for C71110) and C 0.05%.

(9) = Cu + Sum of Named Elements 99.93% min.

(10) = Cu + Sum of Named Elements 99.8% min.

(11) = Cu + Sum of Named Elements 99.7% min.

(12) = Includes Co.

(13) = 0.005% Pb max. for hot rolling.