wieland concast

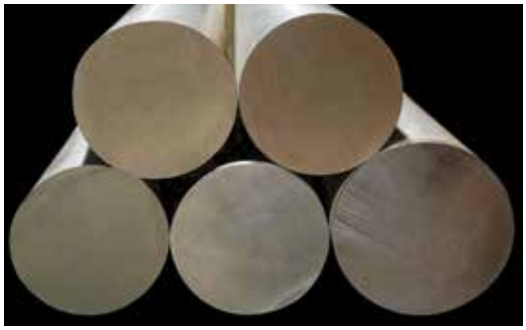
Standard-stocked alloys

Continuous-cast alloys	
C86300	Manganese bronze
C89835	Bismuth tin bronze
C90300	Tin bronze
C93200	Leaded tin bronze
C95400	Aluminum bronze
C95500	Nickel aluminum bronze
AMS 4880-C95510	Nickel aluminum bronze
C95900	Aluminum bronze

Extruded or cast and drawn alloys	
C14500	Tellurium copper
C51000	Phosphor bronze
C54400	Phosphor bronze
AMS 4640-C63000	Nickel-aluminum bronze
AMS 4590-C63020	Nickel-aluminum bronze
AMS 4634-C64200	Aluminum bronze
C67300	Manganese bronze
C72900*	Copper nickel-tin bronze

**AMS 4596, 4597, 4598*

Other alloys available upon request



Continuous-cast alloys

Copper alloy UNS no.	Material description	Chemical properties												Mech. properties		
		Cu%	Pb%	Sn%	Zn%	Fe%	P%	Ni%[3]	Al%	Mn%	S%	Sb%	Si%	Tensile ksi	Yield ksi	Elong. %
C83600	Leaded red brass	84.00-86.00[1]	4.00-6.00	4.00-6.00	4.00-6.00	0.30	1.50	1.00	0.005		0.08	0.25	0.005	36	19	15
C86300*	Manganese bronze	60.00-66.00[1]	0.20	0.20	22.00-28.00	2.00-4.00		1.00	5.00-7.50	2.50-5.00				110	62	14
C86500	Manganese bronze	55.00-60.00[1]	0.40	1.00	36.00-42.00	0.40-2.00		1.00	0.50-1.50	0.10-1.50				70	25	25
C89835*[A]	Bismuth tin bronze	85.00-89.00	0.09	6.00-7.50	2.00-4.00	0.20	0.10	1.00	0.005		0.08	0.35	0.005	30	14	6
C90300*	Tin bronze	86.00-89.00[1]	0.30	7.50-9.50	3.00-5.00	0.20	1.50	1.00	0.005		0.05	0.20	0.005	44	22	18
C90500	Tin bronze	86.00-89.00[1]	0.30	9.00-11.00	1.00-3.00	0.20	1.50	1.00	0.005		0.05	0.20	0.005	44	25	10
C90700	Tin bronze	88.00-90.00[1]	0.50	10.00-12.00	0.50	0.15	1.50	0.50	0.005		0.05	0.20	0.005	40	25	10
C91100	High tin Bronze	82.00-85.00[1]	0.25	15.00-17.00	0.25	0.25	1.00	0.50	0.005		0.05	0.20	0.005	35	25	2
C92900	Leaded nickel tin bronze	82.00-86.00[1]	2.00-3.20	9.00-11.00	0.25	0.20	1.50	2.80-4.00	0.005		0.05	0.25	0.005	45	25	8
C93200*	Leaded tin bronze	81.00-85.00[1]	6.00-8.00	6.30-7.50	2.00-4.00	0.20	1.50	1.00	0.005		0.08	0.35	0.005	35	20	10
C93700	High-leaded Tin bronze	78.00-82.00	8.00-11.00	9.00-11.00	0.80	0.70	1.50	0.50	0.005		0.08	0.50	0.005	35	20	6
C93800	High-leaded Tin bronze	75.00-79.00	13.00-16.00	6.30-7.50	0.80	0.15	1.50	1.00	0.005		0.08	0.80	0.005	25	16	5
C94100	High-leaded Tin bronze	72.00-79.00	18.00-22.00	4.50-6.50	1.00	0.25	1.50	1.00	0.005		0.25[4]	0.80	0.005	25	17	7
C94300	High-leaded Tin bronze	67.00-72.00	23.00-27.00	4.50-6.00	0.80	0.15	1.50	1.00	0.005		0.25[4]	0.80	0.005	21	15	7
C95400*	Aluminum bronze	83.00 min				3.00-5.00		1.50	10.00-11.50	0.50				85	32	12
C95500*	Nickel-aluminum bronze	78.00 min				3.00-5.00		3.00-5.50	10.00-11.50	3.50				95	42	10
C95510*[2]	Nickel-aluminum bronze	78.00 min		0.20	0.30	2.00-3.50		4.50-5.50	9.70-10.90	1.50				95[5]	56[5]	9
C95900*	Aluminum bronze	Rem.				3.00-5.00		0.50	12.00-13.50	1.50						

**standard-stocked alloy. [1]In determining Cu min, Cu may be calculated as Cu + Ni. [2]AMS 4880. [3]Ni value includes Co.*
[4]For continuous castings, S shall be 0.25% max. [5]Castings 4.0+. [A]Chemical requirements for other elements: Bi% 1.70-2.70.
Note: Unless otherwise noted, single values in Chemical properties represent maximums.

Extruded or cast and drawn alloys

Copper alloy UNS no.	Material description	Chemical properties													Mechanical properties[1]			
		Cu%	Pb%	Sn%	Zn%	Fe%	P%	Ni%	Al%	Mn%	Si%	As%	Co%	Mg%	Tensile ksi	Yield ksi	Elong. %	Std. temper
C14500*[1]	Tellurium copper	99.90 min[4]					0.004-0.012								38	30	8	H02
C31400	Leaded commercial bronze	87.50-90.50	1.30-2.50		Rem.	0.10		0.70							50	30	7	H02
C31600	Leaded commercial bronze[2]	87.50-90.50	1.30-2.50		Rem.	0.10	0.04-0.10	0.70-1.20							50	30	7	H02
C51000*	Phosphor bronze 5% A	Rem.	0.05	4.20-5.80	0.30	0.10	0.03-0.35								70		13	H04
C52100	Phosphor bronze 8% C	Rem.	0.05	7.00-9.00	0.20	0.10	0.03-0.35								85		12	H04
C53400	Phosphor bronze B-1	Rem.	0.80-1.20	3.50-5.80	0.30	0.10	0.03-0.35								60		10	H04
C54400*	Phosphor bronze B-2	Rem.	3.00-4.00	3.50-4.50	1.50-4.50	0.10	0.01-0.50								60		10	H04
C63000*[3]	Nickel-aluminum bronze	Rem.[4]		0.20	0.30	2.00-4.00		4.00-5.50	9.00-11.00	1.50	0.25				110	68	10	HR50
C63020*[6,7]	Nickel-aluminum bronze	Rem.	0.03	0.25	0.30	4.00-5.50		4.20-6.00[8]	10.00-11.00	1.50	0.15		0.20		135	100	6	TQ50
C64200*[9]	Aluminum bronze	Rem.[4]	0.05	0.20	0.50	0.30		0.25[8]	6.30-7.60	0.10	1.50-2.20	0.15			90	45	9	HR50
C65100	Low-silicon bronze B	Rem.[4]	0.05		1.50	0.80				0.70	0.80-2.00				55	20	11	H02
C67300*	Manganese bronze	58.00-63.00	0.40-3.00	0.30	Rem.	0.50		0.25[8]	0.25	2.00-3.50	0.50-1.50				65	40	12	H02
C69300	Lead-free brass	73.00-77.00[4]	0.02[5]-0.09	0.20	Rem.	0.10	0.04-0.15	0.10		0.10	2.70-3.40				85	45	5	H02
C72900*[10,11]	Copper nickel-tin bronze	Rem.	0.02	7.50-8.50	0.50	0.50		14.50-15.50[8]		0.30				0.15	Dependent on AMS. See spec sheets.			

**standard-stocked alloy. [1]rod, ½" diameter and under (C14500, ¼" diameter and under). [1]Chemical requirements for other elements: Te% 0.40 0.70.*
[2](nickel-bearing). [3]AMS 4640. [4]Cu value includes Ag. [5]Pb content is greater than 0.02%. [6]Chemical requirements for other elements: Cr% 0.05, max.
[7]AMS 4590. [8]Ni value includes Co. [9]AMS 4634. [10]Available as AMS 4596, 4597, 4598. [11]Chemical requirements for other elements: Cb% 0.10, max.
Note: Unless otherwise noted, single values in Chemical properties represent maximums.

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