

## Tin Bronze & Leaded Tin Bronze

		Composition (% maximum except as indicated)													Sand Cast Mechanical Properties				Pour Temperature	
Copper Alloy Number	Ingot Number	Copper (Cu) incl Ni	Tin (Sn)	Lead (Pb)	Zinc (Zn)	Iron (Fe)	Antimony (Sb)	Nickel (Ni) incl Co	Sulfur (S)	Phosphorus (P)	Aluminum (Al)	Silicon (Si)	Other	Total Named Elements	Tensile ksi	Yield ksi	Elongation %	Brinell 500 kg Load	Light Castings	Heavy Castings
C90300	225	86.0-89.0	7.8-9.0	0.25	3.5-5.0	0.15	0.20	0.8	0.05	0.03	0.005	0.005		99.4	40	18	20		2100-2300	1900-2100
C90500	210	86.0-89.0	9.5-10.5	0.25	1.5-3.0	0.15	0.20	0.8	0.05	0.03	0.005	0.005		99.7	40	18	20		2100-2300	1900-2100
C90700	205	88.0-90.0	10.3-12.0	0.50 <sup>x</sup>	0.50 <sup>x</sup>	0.15	0.20	0.50 <sup>x</sup>	0.05	0.30	0.005	0.005		99.4	35	17	10	65	1900-2000	1800-1900
C90800	*	85.0-89.0	11.3-13.0	0.25	0.25	0.15	0.10	0.50	0.05	0.30	0.005	0.005		99.4	35	17	10	65	1900-2000	1800-1900
C91000	197	84.0-86.0	14.3-16.0	0.20	1.5	0.10	0.10	0.8	0.05	0.03	0.005	0.005		99.4	check CDA for typical props				1900-2000	1800-1900
C91100		82.0-85.0	15.3-17.0	0.25	0.25	0.15	0.20	0.50	0.05	1.0	0.005	0.005		99.4	check CDA for typical props				1900-2000	1800-1900
C91300	194	79.0-82.0	18.0-20.0	0.25	0.25	0.25	0.20	0.50	0.05	1.0	0.005	0.005		99.4	check CDA for typical props				1900-2000	1800-1900
C91600	205A	86.0-89.0	10.0-10.8	0.25	0.25	0.15	0.10	1.2-2.0	0.05	0.25	0.005	0.005		99.4	35	17	10	65	2000-2200	1900-2000
C91700	*	84.0-87.0	11.5-12.5	0.25	0.25	0.15	0.10	1.2-2.0	0.05	0.30	0.005	0.005		99.4	35	17	10	65	2000-2200	1900-2000
C92200	245	86.0-89.0	5.8-6.5	1.0-1.8	3.5-5.0	0.20	0.20	0.8	0.05	0.03	0.005	0.005		99.5	34	16	22		2100-2300	1900-2150
C92300	230	85.0-89.0	7.8-9.0	0.30-0.9	3.0-5.0	0.20	0.20	0.8	0.05	0.03	0.005	0.005		99.3	36	16	18		2100-2300	1900-2100
C92500	200A	85.0-88.0	10.3-12.0	1.0-1.5	0.50	0.20	0.20	0.8-1.5	0.05	0.30	0.005	0.005		99.3	check CDA for typical props				1900-2000	1800-1900
C92600	215	86.0-88.5	9.3-10.5	0.8-1.5	1.3-2.5	0.20	0.25	0.7	0.05	0.03	0.005	0.005		99.3	40	18	20		2100-2300	1920-2100
C92700	206	86.0-89.0	9.3-11.0	1.0-2.3	0.8	0.15	0.20	0.8	0.05	0.25	0.005	0.005		99.3	check CDA for typical props				2150-2300	1950-2150
C92800	295	78.0-82.0	15.3-17.0	4.0-5.7	0.8	0.15	0.20	0.8	0.05	0.05	0.005	0.005		99.3	check CDA for typical props				1900-2000	1800-1900
C92900	* 206A	82.0-86.0	9.3-11.0	2.0-3.0	0.25	0.15	0.10	2.8-4.0	0.05	0.50	0.005	0.005		99.3 *	45	25	8	75	2000-2200	1900-2000
C94700		86.0-89.0	4.7-6.0	0.08 <sup>+</sup>	1.3-2.5	0.20	0.10	4.5-6.0	0.05	0.05	0.005	0.005	0.20 Mn	98.7	45	20	25		2150-2300	2000-2150
C94800		85.0-89.0	4.7-6.0	0.30-0.9	1.3-2.5	0.20	0.10	4.5-6.0	0.05	0.05	0.005	0.005	0.20 Mn	98.7	40	20	20		2150-2300	2000-2150
C94900		79.0-81.0	4.3-6.0	4.0-5.7	4.3-6.0	0.25	0.25	4.5-6.0	0.08	0.05	0.005	0.005	0.10 Mn	99.4	38	15	15		2200-2350	2100-2200

\* sum of Cu + Sn + Pb + Ni + P = 99.5 min

x sum of Pb + Zn + Ni = 1 % max; Ni not including Co

+ heat treated mechanical properties may not be attained if Pb > 0.01%