TANARA METALLI

Raffineria metalli non ferrosi - Rame Stagno Piombo Zinco e loro leghe - Bronzo in pani per fonderie

EN1982:2008 Number	Symbol	Cu	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	Notes
CB480K	CuSn10-B	**88.5 - 90.5a)**	< 0.01	< 0.15	< 0.10	< 1.8	< 0.05	< 0.8	< 0.04	< 0.15	< 0.01	**9.3 -11.0**	< 0.5	a) Including nickel
CC480K	CuSn10-C	**88.0 - 90.0a)**	< 0.01	< 0.2	< 0.10	< 2.0	< 0.2	< 1.0	< 0.05	< 0.2	< 0.02	**9.0 -11.0**	< 0.5	
CB481K	CuSn11P-B	**87.0 - 89.3**	< 0.01	< 0.10	< 0.05	< 0.10	0.6 - 1.0a)	< 0.25	< 0.05	< 0.05	< 0.01	**10.2 - 11.5**	< 0.05	a) For sand castings for non-bearing applications the phosphorus may be restricted to 0.15 max. (Note: See ordering information of EN 1982:2008 for different compositions for special applications).
CC481K	CuSn11P-B	**87.0 - 89.5**	< 0.01	< 0.10	< 0.05	< 0.10	0.5 - 1.0a)	< 0.25	< 0.05	< 0.05	< 0.01	**10.0 - 11.5**	< 0.05	
CB482K	CuSn11Pb2-B	**83.5 - 86.5**	< 0.01	< 0.15	< 0.2	< 2.0	< 0.05	**0.7 -2.5**	< 0.08	< 0.20	< 0.01	**10.7 - 12.5**	< 2.0	
CC482K	CuSn11Pb2-C	**83.5 - 87.0**	< 0.01	< 0.20	< 0.2	< 2.0	< 0.40	**0.7 -2.5**	< 0.08	< 0.2	< 0.01	**10.5 - 12.5**	< 2.0	
CB483K	CuSn12-B	**85.5 - 88.5a)**	< 0.01	< 0.15	< 0.2	< 2.0	< 0.20	< 0.6	< 0.05	< 0.15	< 0.01	**11.2 - 13.0**	< 0.4	a) For continuous castings and centrifugal castings, the minimum tin content for ingots shall be 10.7 % and for castings 10.5 % and the maximum copper content for ingots and castings shall be 89.0 %.
CC483K	CuSn12-C	**85.0 - 88.5a)**	< 0.01	< 0.2	< 0.2	< 2.0	< 0.60	< 0.7	< 0.05	< 0.15	< 0.01	**11.0 - 13.0**	< 0.5	
CB484K	CuSn12Ni2-B	**84.0 - 87.0**	< 0.01	< 0.15	< 0.10	**1.5 -2.4**	< 0.05	< 0.2	< 0.04	< 0.05	< 0.01	**11.3 - 13.0**	< 0.3	
CC484K	CuSn12Ni2-C	**84.5 - 87.5**	< 0.01	< 0.20	< 0.2	**1.5 -2.5**	0.05 - 0.40	< 0.3	< 0.05	< 0.1	< 0.01	**11.0 - 13.0**	< 0.4	
CB490K	CuSn3Zn8Pb5-B	**81.0 - 85.5a)**	< 0.01	< 0.50		< 2.0	< 0.03	**3.5 -5.8**	< 0.08	< 0.25	< 0.01	**2.2 -3.5**	**7.5 - 10.0**	a) Including nickel
CC490K	CuSn3Zn8Pb5-C	**81.0 - 86.0a)**	< 0.01	< 0.5		< 2.0	< 0.05	**3.0 -6.0**	< 0.10	< 0.30	< 0.01	**2.0 -3.5**	**7.0 -9.5**	
CB491K	CuSn5Zn5Pb5-B	**83.0 - 86.5a)**	< 0.01	< 0.25		< 2.0	< 0.03	**4.2 -5.8**	< 0.08	< 0.25	< 0.01	**4.2 -6.0**	**4.5 -6.5**	a) Including nickel
CC491K	CuSn5Zn5Pb5-C	**83.0 - 87.0a)**	< 0.01	< 0.3		< 2.0	< 0.10	**4.0 -6.0**	< 0.10	< 0.25	< 0.01	**4.0 -6.0**	**4.0 -6.0**	

EN1982:2008 Number	Symbol	Cu	Al	Fe	Mn	Ni	P	Pb	S	Sb	Si	Sn	Zn	Notes
CB492K	CuSn7Zn2Pb3-B	**85.0 - 88.5a)**	< 0.01	< 0.20		< 2.0b)	< 0.03	**2.7 -3.5**	< 0.08	< 0.25	< 0.01	**6.2 -8.0b)**	**1.7 -3.2**	a) Including nickel b) (Tin + ½ nickel) content shall be in the range 7.0 % to 8.0 %
CC492K	CuSn7Zn2Pb3-C	**85.0 - 89.0a)**	< 0.01	< 0.2		< 2.0b)	< 0.10	**2.5 -3.5**	< 0.10	< 0.25	< 0.01	**6.0 -8.0b)**	**1.5 -3.0**	
CB493K	CuSn7Zn4Pb7-B	**81.0 - 84.5a) b)**	< 0.01	< 0.20		< 2.0	< 0.03	**5.2 -8.0**	< 0.08	< 0.30	< 0.01	**6.2 -8.0b)**	**2.3 -5.0**	a) Including nickel b) For continuous castings and centrifugal castings, the minimum tin content for ingots shall be 5.4 % and for castings 5.2 % and the maximum copper content for ingots shall be 85.0 % and for castings 86.0 %.
CC493K	CuSn7Zn4Pb7-C	**81.0 - 85.0a) b)**	< 0.01	< 0.2		< 2.0	< 0.10	**5.0 -8.0**	< 0.10	< 0.3	< 0.01	**6.0 -8.0b)**	**2.0 -5.0**	
CB494K	CuSn5Pb9-B	**80.0 - 86.5a)**	< 0.01	< 0.20	< 0.2	< 2.0	< 0.10	**8.2 - 10.0**	< 0.08	< 0.5	< 0.01	**4.2 -6.0**	< 2.0	a) Including nickel
CC494K	CuSn5Pb9-C	**80.0 - 87.0a)**	< 0.01	< 0.25	< 0.2	< 2.0	< 0.10	**8.0 - 10.0**	< 0.10	< 0.5	< 0.01	**4.0 -6.0**	< 2.0	
CB495K	CuSn10Pb10-B	**78.0 - 81.5a)**	< 0.01	< 0.20	< 0.2	< 2.0	< 0.10	**8.2 - 10.5**	< 0.08	< 0.5	< 0.01	**9.2 - 11.0**	< 2.0	a) Including nickel
CC495K	CuSn10Pb10-C	**78.0 - 82.0a)**	< 0.01	< 0.25	< 0.2	< 2.0	< 0.10	**8.0 - 11.0**	< 0.10	< 0.5	< 0.01	**9.0 - 11.0**	< 2.0	
CB496K	CuSn7Pb15-B	**74.0 - 79.5a)**	< 0.01	< 0.20	< 0.20	**0.5 -2.0**	< 0.10	**13.2 - 17.0**	< 0.08	< 0.5	< 0.01	**6.2 -8.0**	< 2.0	a) Including nickel
CC496K	CuSn7Pb15-C	**74.0 - 80.0a)**	< 0.01	< 0.25	< 0.20	**0.5 -2.0**	< 0.10	**13.0 - 17.0**	< 0.10	< 0.5	< 0.01	**6.0 -8.0**	< 2.0	
CB497K	CuSn5Pb20-B	**70.0 - 77.5a)**	< 0.01	< 0.20	< 0.20	**0.5 -2.5**	< 0.10	**19.0 - 23.0**	< 0.08	< 0.75	< 0.01	**4.2 -6.0**	< 2.0	a) Including nickel
CC497K	CuSn5Pb20-C	**70.0 - 78.0a)**	< 0.01	< 0.25	< 0.20	**0.5 -2.5**	< 0.10	**18.0 - 23.0**	< 0.10	< 0.75	< 0.01	**4.0 -6.0**	< 2.0	
CB498K	CuSn6Zn4Pb2-B	**86.0 - 89.5a)**	< 0.01	< 0.25		< 1.0	< 0.03	**1.2 -2.0**	< 0.08	< 0.25	< 0.01	**5.7 -6.5**	**3.2 -5.0**	a) Including nickel
CC498K	CuSn6Zn4Pb2-C	**86.0 - 90.0a)**	< 0.01	< 0.25		< 1.0	< 0.05	**1.0 -2.0**	< 0.10	< 0.25	< 0.01	**5.5 -6.5**	**3.0 -5.0**	
CB499K	CuSn5Zn5Pb2-B	**84.0 - 87.5**	< 0.01	< 0.30		< 0.60	< 0.03	< 3.0	< 0.04	< 0.10	< 0.01	**4.2 -6.0**	**4.5 -6.5**	Note: For drinking water applications no other single element should be more than 0.02 %. The sum of these single elements should not exceed 0.25 %.
CC499K	CuSn5Zn5Pb2-C	**84.0 - 88.0**	< 0.01			< 0.60	< 0.04	< 3.0	< 0.04	< 0.10	< 0.01	**4.0 -6.0**	**4.0 -6.0**	

EN1982:2008 Number	Symbol	Casting process and designation	Tensile strength Rm N/mm2 min.	0.2 % proof strength Rp0.2 N/mm2 min.	Elongation A % min.	Brinell hardness HBW min.
CB480K	CuSn10-B	Sand – GS	250	130	18	70
CC480K	CuSn10-C	Perm. mould – GM	270	160	10	80
		Continuous – GC	280	170	10	80
		Centrifugal – GZ	280	160	10	80
CB481K	CuSn11P-B	Sand – GS	250	130	5	60
CC481K	CuSn11P-C	Perm. mould – GM	310	170	2	85
		Continuous – GC	350	170	5	85
		Centrifugal – GZ	330	170	4	85
CB482K	CuSn11Pb2-B	Sand – GS	240	130	5	80
CC482K	CuSn11Pb2-C	Centrifugal – GZ	280	150	5	90
		Continuous – GC	280	150	5	90
CB483K	CuSn12-B	Sand – GS	260	140	7	80
CC483K	CuSn12-C	Perm. mould – GM	270	150	5	80
		Continuous – GC	300	150	6	90
		Centrifugal – GZ	280	150	5	90
CB484K	CuSn12Ni2-B	Sand – GS	280	160	12	85
CC484K	CuSn12Ni2-C	Centrifugal – GZ	300	180	8	95
		Continuous – GC	300	180	10	95

EN1982:2008 Number	Symbol	Casting process and designation	Tensile strength Rm N/mm2 min.	0.2 % proof strength Rp0.2 N/mm2 min.	Elongation A % min.	Brinell hardness HBW min.
CB490K	CuSn3Zn8Pb5-B	Sand – GS	180	85	15	60
CC490K	CuSn3Zn8Pb5-C	Centrifugal – GZ	220	100	12	70
		Continuous – GC	220	100	12	70
CB491K	CuSn5Zn5Pb5-B	Sand – GS	200	90	13	60
CC491K	CuSn5Zn5Pb5-C	Perm. mould – GM	220	110	6	65
		Centrifugal – GZ	250	110	13	65
		Continuous – GC	250	110	13	65
CB492K	CuSn7Zn2Pb3-B	Sand – GS	230	130	14	65
CC492K	CuSn7Zn2Pb3-C	Perm. mould – GM	230	130	12	70
		Centrifugal – GZ	260	130	12	70
		Continuous – GC	270	130	12	70
CB493K	CuSn7Zn4Pb7-B	Sand – GS	230	120	15	60
CC493K	CuSn7Zn4Pb7-C	Perm. mould – GM	230	120	12	60
		Continuous – GC	260	120	12	70
		Centrifugal – GZ	260	120	12	70
CB494K	CuSn5Pb9-B	Sand – GS	160	60	7	55
CC494K	CuSn5Pb9-C	Perm. mould – GM	200	80	5	60
		Centrifugal – GZ	200	90	6	60
		Continuous – GC	200	100	9	60

EN1982:2008 Number	Symbol	Casting process and designation	Tensile strength Rm N/mm2 min.	0.2 % proof strength Rp0.2 N/mm2 min.	Elongation A % min.	Brinell hardness HBW min.
CB495K	CuSn10Pb10-B	Sand – GS	180	80	8	60
CC495K	CuSn10Pb10-C	Perm. mould – GM	220	110	3	65
		Centrifugal – GZ	220	110	6	70
		Continuous – GC	220	110	8	70
CB496K	CuSn7Pb15-B	Sand – GS	170	80	8	60
CC496K	CuSn7Pb15-C	Perm. mould – GM	200	90	8	65
		Centrifugal – GZ	200	90	7	65
CB497K	CuSn5Pb20-B	Sand – GS	150	70	5	45
CC497K	CuSn5Pb20-C	Perm. mould – GM	180	90	7	50
		Centrifugal – GZ	170	80	6	50
		Continuous – GC				
CB498K	CuSn6Zn4Pb2-B	Sand – GS	220	110	15	65
CC498K	CuSn6Zn4Pb2-C	Perm. mould – GM	220	110	12	70
		Centrifugal – GZ	240	110	12	70
		Continuous – GC	240	110	12	70
CB499K	CuSn5Zn5Pb2-B	Sand – GS	200	90	13	60
CC499K	CuSn5Zn5Pb2-C	Perm. mould – GM	220	110	6	65
		Centrifugal – GZ	250	110	13	65
		Continuous – GC	250	110	13	65