

Cutech Alloys Private Limited

TIN BRONZE

British - Std UK. (BS:1400)

Copper Alloys	Standard	Cu	Sn	Fe Pb	Zn	Fe	Ni	Sb	P	Al	Mn	Si	Sb	S	Bi	Cr	Impurities
CT-1		Rem.	9-11	0.25	0.05		0.25		0.15								0.8
CT-2		85-87.3	11.2-13	0.2	0.4	0.15	1.5-2 A		0.05	0.01	0.2	0.01	0.1	0.05			0.8
G1(88/10/2)		Rem.	9.5-10.5	1.5	1.75-2.7	0.15	1			0.01		0.02	0.2		0.03		0.5
G3		Rem.	6.5-7.5	0.1-0.5	1.5-3		5.25-5.75		0.02	0.01	0.2	0.01	0.2		0.02		0.5
G3WP		Rem.	6.5-7.5	0.1-0.5	1.5-3		5.25-5.75		0.02	0.01	0.2	0.01	0.2		0.02		0.5
PB 1		Rem.	10 Min	0.25	0.05	0.1	0.1	0.5 Min	0.01		0.02						0.6
PB 2		Rem.	11-13	0.5	0.3	0.15	0.5	0.15 Min	0.01		0.02						0.2
PB-4		Rem.	9.5 Min	0.75	0.5		0.5	0.4 Min									0.5

INDIA- IS

Copper Alloys	Standard	Cu	Sn	Pb	Zn	Fe	Ni	P	Al	Mn	Si	Sb	S	Bi	Cr	Impurities
Phosphorus Bronze.Class-1	IS:1458-1965	Rem.	6-8	0.5	0.5	0.3		0.4-0.6	0.01			0.1				0.6
Phosphorus Bronze (Grade - 1)	IS 28-1985	Rem.	6-8	0.25	0.5	0.3	0.7	0.3-0.5	0.01		0.02	0.1				1.2
Phosphorus Bronze (Grade - 2)	IS 28-1985	Rem.	10 Min	0.25	0.05	0.1	0.1	0.5 Min	0.01		0.02					0.6
Phosphorus Bronze (Grade - 3)	IS 28-1985	Rem.	6.5-8.5	2-5	2		1	0.3 Min								0.5
Phosphorus Bronze (Grade - 4)	IS 28-1985	Rem.	9-11	0.25	0.05		0.25	0.15								0.8
Phosphorus Bronze (Grade - 5)	IS 28-1985	Rem.	11-13.1	0.5	0.3	0.15	0.5	0.15 min	0.01		0.02					2

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France - NFA53

Copper Alloys	Standard	Cu	Sn	Pb	Zn	Fe	Ni	P	Al	Mn	Si	Sb	S	Bi	Cr	Impurities
CuSn12	707	Rem	10.5-13	25	2	0.25	2	0.3	0.01	`	0.01		0.05			0.5
CuSn12P	707	Rem	11-13	1	1	0.2	2	0.05-0.4	0.01		0.01		0.05			1.2
CuSn14	707	83.5 Min	12.5 Min		1						0.01					1.5
CuSn8	707	Rem	7-9	0.5-3	3	0.2	1.5		0.01		0.01		0.1			1

GERMANY- DIN

Copper Alloys Standard	Standard	Cu	Sn	Pb	Zn	Fe	Ni	P	Al	Mn	Si	Sb	S	Bi	Cr	Impurities
GbCuSn10		88.5-90.5	9.3-11	0.8	0.5	0.15	1.8	0.05	0.01	0.1	0.01	0.15	0.04			
CuSn4	(CW450K)	Rem	3.5-4.5	0.02	0.2	0.1	0.2	0.01-0.4								0.2
CuSn5	(CW451K)	Rem	4.5-5.5	0.02	0.2	0.1	0.2	0.01-0.4								0.2
CuSn5Pb1	(CW458K)	Rem	3.5-5.5	0.5-1.5	0.3	0.1	0.2	0.01-0.4								0.2
CuSn6		86-89.5	5.7-6.5	1.2-2	3.2-5	0.25		0.03	0.01		0.01		0.08			
CuSn6	(CW452K)	Rem	5.5-7	0.02	0.2	0.1	0.2	0.01-0.4								0.2
CuSn8	(CW453K)	Rem	7.5-8.5	0.02	0.2	0.1	0.2	0.01-0.4								0.2
CuSn8P	(CW459K)	Rem	7.5-8.5	0.05	0.3	0.1	0.3	0.2-0.4								0.2
CuSn8PbP	(CW460K)	Rem	7.5-9	0.1-0.5	0.3	0.1	0.3	0.2-0.4								0.2
CuSnPb2P	(CW455K)	Rem	3.5-4.5	1.5-2.5	0.3	0.1	0.2	0.2-0.4								0.2
GbCuSn12		86-88	11.3-13	0.8	0.5	0.15	1.8	0.05	0.01	0.1	0.01	0.15	0.04			
GbCuSn12-B		Rem	11.8-13	0.8-1		0.15	1-1.5	0.06	0.01	0.1	0.01	0.15	0.03			
GbCuSn12Ni		84-87	11.3-13	0.15	0.3	0.15	1.5-2.4	0.05	0.01	0.1	0.01	0.05	0.04			
G-CuSn10Zn		86-88.5	9.2-11	1.3	1-3	0.2	1.8	0.03	0.01	0.1		0.25	0.06			
G-CuSn12Pb		84.3-87.3	11.3-13	1.2-2	0.5	0.15	1.8	0.05	0.01	0.1	0.01	0.15	0.04			
G-SnBz10		89-91	9-11													
G-SnBz12		87-89	11-13													
G-SnBz14		85-87	13-15													
G-SnBz20		78-80	20-22													
RG-10		85-87	9-11	1.5	1.75-2.75	0.15	1		0.01		0.02	0.2				

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EUROPE- EN 1982:1998

Copper Alloys	Standard	Cu	Sn	Pb	Zn	Fe	Ni	P	Al	Mn	Si	Sb	S	Bi	Cr	Impurities
CuSn10	(CB480K)	88.5-90.5	9.3-11	0.8	0.5	0.15	1.8	0.05	0.01	0.1	0.01	0.15	0.04			
CuSn11P	(CB481K)	87-89.3	10.2-11.5	0.25	0.05	0.1	0.1	0.6-1	0.01	0.05	0.01	0.05	0.05			
CuSn12	(CB483K)	85.5-88.5	11.2-13	0.6	0.4	0.15	2	0.2	0.01	0.2	0.01	0.15	0.05			
CuSn12Ni2	(CB484K)	84-87	11.3-13	0.2	0.3	0.15	1.5-2.4	0.05	0.01	0.1	0.01	0.05	0.04			

ITALY - UNI

Copper Alloys	Standard	Cu	Sn	Pb	Zn	Ni	Fe	Ni	P	Al	Mn	Si	Sb	S	Bi	Cr	Impurities
B10	UNI1698	88-92	8-12	1.0			0.3	0.5	0.05				0.2				
B14	UNI1698	84-88	12-16	1			0.3	0.5	0.05				0.2				
B20	UNI1698	78-81	18-21	1			0.3	0.5	0.05				0.2				
B Zn 2	UNI1698	92-94	3-5	2	Rem		0.2	0.1	0.05				0.1				
B Zn 4	UNI1698	85-88	9-11	1	Rem		0.3	1.0	0.05				0.3				
B Zn 6	UNI1698	85.5- 87.5	7.5- 8.5	2.5	Rem		0.2	0.1	0.05				0.3				
G-CuSn10	UNI7013	Rem.	9-11	0.8	0.5		0.2	0.7	0.05		0.2		0.2	0.1			
G-CuSn10Zn2	UNI7013	Rem.	8.5-11	1.3	1-3		0.2	1	0.05		0.2		0.3	0.1		2	
G-CuSn10Zn2Ni2	UNI7013	Rem.	9-11	1	1.5 - 2.5		0.2	1.8 - 2.5	0.05		0.2		0.3	0.1		2	
G-CuSn12	UNI7013	Rem.	11- 13	1	0.5		0.2	0.7	0.05		0.2		0.2	0.1		1.5	

JAPAN - JIS

Copper Alloys	Standard	Cu	Sn	Pb	Zn	Fe	Ni	P	Al	Mn	Si	Sb	S	Bi	Cr	Impurities
BC-2	H2203	86-90	7-9-	1.0	3-5	0.2	1	0.05	0.01		0.01	0.2				
BC-3	H2203	86.5-89.5	9-11	1.0	1-3	0.2	1	0.05	0.01		0.01	0.2				
PBC2	H2204	87-91	9-12	0.3	0.3	0.2	1.0	0.05-0.02	0.01		0.01	0.05				
PBC3	H2204	84-88	12-15	0.3	0.3	0.2	1.0	0.15-0.5	0.01		0.01	0.05				

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USA-ASTM

Copper Alloys	Standard	Cu	Sn	Pb	Zn	Fe	Ni	P	Al	Mn	Si	Sb	S	Bi	Cr	Impurities
C89320		87-91	5-7	0.1	1.0	0.2	1.0	0.3	0.0		0.0	0.4	0.1	4-6		
C40820		94 Min	1-2.5	0.0	0.2-2.5		0.1-0.5	0.1								
C50100		Rem.	0.5-0.8	0.1		0.1		0.01-0.05								
C50200		Rem.	1-1.5	0.1		0.1		0.0								
C50500		Rem.	1-1.7	0.1	0.3	0.1		0.03-0.35								
C50510		Rem.	1-1.5	Mn	0.1-0.25		0.15-0.4	0.02-0.07								
C50580		Rem.	1-1.7	0.1	0.3	0.05-0.2	0.05-0.2	0.01-0.35								
C50590		Rem.	0.5-1.5	0.0	0.5	0.05-0.4		0.02-0.15								
C50700		Rem.	1.5-2	0.1		0.1		0.3								
050705		Rem.	1.5-2	0.0	0.5	0.1-0.4		0.04-0.15								
050710		Rem.	1.7-2.3				0.1-0.4	0.2								
C50715		Rem.	1.7-2.3	0.0		0.05-0.15		0.025-0.04								
C50725		Rem.	1.5-2.5	0.0	1.5-3	0.05-0.2		0.02-0.06								
C50780		Rem.	1.7-2.3	0.1	0.3	0.05-0.2	0.05-0.2	0.01-0.35								
C50900		Rem.	2.5-3.8	0.1	0.3	0.1		0.03-0.3								
C51000		Rem.	4.2-5.8	0.1	0.3	0.1		0.03-0.35								
C51080		Rem.	4.8-5.8	0.1	0.3	0.05-0.2	0.05-0.2	0.01-0.35								
C51100		Rem.	3.5-4.9	0.1	0.3	0.1		0.03-0.35								
C51180		Rem.	3.5-4.9	0.1	0.3	0.05-0.2	0.05-0.2	0.01-0.35								
C51190		Rem.	3-6.5	0.0		0.05-0.15		0.025-0.045								
C51800		Rem.	4-6	0.0				0.10-0.35	0.0							

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Copper Alloys	Standard	Cu	Sn	Pb	Zn	Fe	Ni	P	Al	Mn	Si	Sb	S	Bi	Cr	Impurities
C51900		Rem.	5-7	0.1	0.3	0.1		0.3-0.35								
C51980		Rem.	5.5-7	0.1	0.3	0.05-0.2	0.05-0.2	0.01-0.35								
C52100		Rem.	7-9	0.1	0.2	0.1		0.03-0.35								
C52180		Rem.	7-9	0.1	0.3	0.05-0.2	0.05-0.2	0.01-0.35								
C52400		Rem.	9-11	0.1	0.2	0.1		0.03-0.35								
C52480		Rem.	9-11	0.1	0.3	0.05-0.2	0.05-0.2	0.1-0.35								
C53400		Rem.	3.5-5.8	0.8-1.2	0.3	0.1		0.03-0.35								
C53800		Rem.	13.1-13.9	0.4-0.6	0.1	0.0	0.0			0.1						
C89325		84-88	9-11	0.1	1.0	0.2	1.0	0.1	0.0		0.0	0.5	0.1	2.7-3.7		
C89510		86-88	4-6	0.3	4-6	0.2	1.0	0.1	0.0		0.0	0.3	0.1	0.5-1.5		
C89520		85-87	5-6	0.3	4-6	0.2	1.0	0.1	0.0		0.0	0.3	0.1	1.6-2.2		
C89530		84-89	3.5-6	0.2	7-9	0.3	1.0	0.1	0.0		0.0	0.2		1-2		
C89831		87-91	2.7-3.7	0.1	2-4	0.3	1.0	0.1	0.0		0.0	0.3	0.1	2.7-3.7		
C89833		87-91	4-6	0.1	2-4	0.3	1.0	0.1	0.0		0.0	0.3	0.1	1.7-2.7		
C89835		85-89	6-7.5	0.1	2-4	0.2	1.0	0.1	0.0		0.0	0.4	0.1	1.7-2.7		
C89836		87-91	4-7	0.3	2-4	0.4	0.9	0.1	0.0		0.0	0.3	0.1	1.5-35		
C89837		84-88	3-4	0.1	6-10	0.3	1.0	0.1	0.0		0.0	0.3	0.1	0.7-1.2		
C89844		83-86	3-5	0.2	7-10	0.3	1.0	0.1	0.0		0.0	0.3	0.1	2-4		
C89940		64-68	3-5	0.0	3-5	0.7-2	20-23	0.1-0.15	0.0		0.2	0.2	0.1	4-5.5		
C90300		86-89	7.5-9	0.3	3-5	0.2	1.0	0.1	0.0		0.0	0.2	0.1			
C90200		91-94	6-8	0.3	0.5	0.2	0.5	0.1	0.0		0.0	0.2	0.1			
C90500		86-89	9-11	0.3	1-3	0.2	1.0	0.1	0.0		0.0	0.2	0.1			
C90700		88-90	10-12	0.5	0.5	0.2	0.5	0.3	0.0		0.0	0.2	0.1			
C30710		REM.	10-12	0.3	0.1	0.1	0.1	0.05-1.2	0.0		0.0	0.2	0.1			
C90800		85-89	11-13	0.3	0.3	0.2	0.5	0.3	0.0		0.0	0.2	0.1			
C90810		Rem.	11-13	0.3	0.3	0.2	0.5	0.15-0.8	0.0		0.0	0.2	0.0			
C90900		86-89	12-14	0.3	0.3	0.2	0.5	0.1	0.0		0.0	0.2	0.0			

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Copper Alloys	Standard	Cu	Sn	Pb	Zn	Fe	Ni	P	Al	Mn	Si	Sb	S	Bi	Cr	Impurities
C91000		84-86	14-16	0.2	1.5	0.1	0.8	0.1	0.0		0.0	0.2	0.0			
C91100		82-85	15-17	0.3	0.3	0.3	0.5	1.0	0.0		0.0	0.2	0.0			
C91300		79-82	18-20	0.3	0.3	0.3	0.5	1.0	0.0		0.0	0.2	0.0			
C91600		86-89	9.7-10.3	0.3	0.3	0.2	1.2-2	0.3	0.0		0.0	0.2	0.0			
C91700		84-87	11.3-12.5	0.3	0.3	0.2	1.2-2	0.3	0.0		0.0	0.2	0.0			
C92200		86-90	5.5-6.5	1-2	3-5	0.3	1.0	0.1	0.0		0.0	0.3	0.1			
C92300		85-89	7.5-9	0.3-1	2.5-5	0.3	1.0	0.1	0.0		0.0	0.3	0.1			
C92310		Rem.	7.5-8.5	0.3-1.5	3.5-4.5		1.0		0.0	0.0	0.0					
C92400		86-89	9-11	1-2.5	1-3	0.3	1.0	0.1	0.0		0.0	0.3	0.1			
C92500		85-88	10-12	1-1.5	0.5	0.3	0.8-1.5	0.3	0.0		0.0	0.3	0.1			
C92600		86-88.5	9.3-10.5	0.8-1.5	1.3-2.5	0.2	0.7	0.0	0.0		0.0	0.3	0.1			
C92610		Rem.	9.5-10.5	0.3-1.5	1.7-2.8	0.2	1.0		0.0	0.0	0.0					
C92700		86-89	9-11	1-2.5	0.7	0.2	1.0	0.3	0.0		0.0	0.3	0.1			
C92710		Rem.	9-11	4 - 6	1.0	0.2	2.0	0.1	0.0		0.0	0.3	0.1			
C92800		78-82	15-17	4 - 6	0.8	0.2	0.8	0.1	0.0		0.0	0.3	0.1			
C92810		78-82	12-14	4 - 6	0.5	0.5	0.8-1.2	0.1	0.0		0.0	0.3	0.1			
C92900		82-86	9-11	2-3.2	0.3	0.2	2.8- 4	0.5	0.0		0.0	0.3	0.1			
C93100		Rem.	6.5-8.5	2- 5	2.0	0.25	1.0	0.3	0.0		0.0	0.3	0.1			
C93200		81-85	6.3-7.5	6 - 8	1-4	0.2	1.0	0.2	0.0		0.0	0.4	0.1			

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