Chemical Compositions

MATERIAL DESIGNATION EN1652 or Alloy		NEAREST FIT		TYPICAL CHEMICAL COMPOSITION %											
Symbol/ Name	Number	UNS	BS 2870	Cu	Be	Co	Fe	Mn	Ni	P	Pb	Sn	Zn	Others	Impurities
PHOSPHOR BRONZES															
CuSn5	CW451K	C51000	PB102	Balance	-	-	0.1	-	0.2	0.01 - 0.4	0.02	4.5 - 5.5	0.2	Al: 0.05	0.2
CuSn6	CW452K	C51900	PB103	Balance	-	-	0.1	-	0.2	0.01 - 0.4	0.02	5.5 - 7.0	0.2	Al: 0.05	0.2
CuSn8	CW453K	-	-	Available by Request											

Mechanical Properties

MATERIAL DESIGNATION EN1652 or Alloy		NEAREST FIT		Material Condition (R Value)	Proof Strength 0.2% Min (N/mm2)	Tensile Strength (N/mm2)	Elong. % Min. (50mm Gauge Length)	Hardness Max (VPN)
Symbol/ Name	Number	UNS	BS 2870					
PHOSPHOR BRONZES								
CuSn5	CW451K	C51000	PB102	R310	250 Max	310-390	45	75-105
				R400	240 Min	400-500	14	120-160
				R490	450 Min	490-580	8	160-190
				R550	520 Min	550-640	4	180-210
				R630	600 Min	630-720	3	200-230
				R690	670 Min	690 Min	-	220 Min
CuSn6	CW452K	C51900	PB103	R350	300 Max	350-420	45	80-110
				R420	260 Min	420-520	17	125-165
				R500	450 Min	500-590	8	160-190
				R560	500 Min	560-650	5	180-210
				R640	600 Min	640-730	3	200-230
				R720	690 Min	720 Min	-	220 Min

Features and Applications

MATERIAL DESIGNATION BSEN1652 (Strip) BSEN12166 (Wire)		NEAREST FIT		Key Features	Key Markets
Symbol/ Name	Number	UNS	BS 2870 (Strip) BS 2873 (Wire)		
PHOSPHOR BRONZES					
CuSn5	CW451K	C51000	PB102	CuSn5 is a solid solution strengthened Brass with 5% tin. It provides a good combination of conductivity and strength with good formability and resistance to corrosion and fatigue.	Automotive, Electrical Engineering
CuSn6	CW452K	C51900	PB103	Alloy CuSn6 has a higher tin content than CuSn5 providing higher tensile strength, corrosion resistance and spring characteristics. It is wear resistant and offers is generally used for more severe service conditions than CuSn5.	Automotive, Electrical Engineering, Paper and Pulp Industry, Chemical Industry
CuSn8	CW453K	-	-	Available by Request	