TABLE 3.2.1 PROPERTIES OF SOLDERS

ALLOY	COMPOSITION CODE	NOMINAL COMPOSITION, %						STANDARD	MELTING RANGE °C		DENSITY g/cm³	U.T.S.	
		Tin	Lead	Antimony	Cadmium	Copper	Silver		Solidus	Liquidus		tonf/in²	N/mm²
PT	99.75/-	100	–	–	–	–	–	BS 3252	232	232	7.3	0.7	11
K	60/40	60	40	–	–	–	–	BS 219, BS 441	183	188	8.5	3.8	59
F	50/50	50	50	–	–	–	–	BS 219, BS 441	183	212	8.9	3.0	46
R	45/55	45	55	–	–	–	–	BS 219	183	224	9.1	2.8	43
G	40/60	40	60	–	–	–	–	BS 219, BS 441	183	234	9.3	2.7	42
H	35/65	35	65	–	–	–	–	BS 219	183	245	9.5	2.6	40
J	30/70	30	70	–	–	–	–	BS 219	183	255	9.7	2.5	39
V	20/80	20	80	–	–	–	–	BS 219, BS 441	183	275	10.0	2.4	37
Sn 63	63/36.7/0.3Sb	63	36.7	0.3	–	–	–	QQ-S-571	183	183	8.4	3.9	60
Sn 60	60/39.7/0.3Sb	60	39.7	0.3	–	–	–	QQ-S-571	183	188	8.5	3.8	59
Sn 50	50/49.7/0.3Sb	50	49.7	0.3	–	–	–	QQ-S-571	183	212	8.9	3.0	46
Sn 40	40/59.7/0.3Sb	40	59.7	0.3	–	–	–	QQ-S-571	183	234	9.3	2.7	42
28A	28/70.5/1.5Sb	28	70.5	1.5	–	–	–	BS AU 90	185	254			
95A	95/0/5Sb	95	–	5	–	–	–	BS 219	236	242	7.3	2.8	43
Savbit 1	50/48.5/1.5Cu	50	48.5	–	–	1.5	–	DTD.900/4535	183	215	8.9	3.5	54
TLC	50/33/17Cd	50	33	–	17	–	–	–	145	145	8.5	4.0	62
HMP	5/93.5/1.5Ag	5	93.5	–	–	–	1.5	BS 219	296	301	11.1	2.3	36
LMP	62/36/2Ag	62	36	–	–	–	2	–	179	179	8.5		
Sn 96	96/0/4Ag	96	–	–	–	–	4	QQ-S-571	221	221	7.5		

ALLOY : The names used by Multicore Solders Limited are listed here. In most cases, the names used are those given in the standards quoted in Column 9.

COMPOSITION CODE : A brief description of the composition, giving the weight percent of tin, lead and other metals present in that order. The code is the same as that used in Table 3.3.1, where alloys appearing also in the above list are marked with an asterisk (*). Except for tin and lead, the chemical symbols are used to denote which metals are present. Sb = Antimony, Cd = Cadmium, Cu = Copper, Ag = Silver.

NOMINAL COMPOSITION : An expanded version of the composition code, to clarify its use.

STANDARD : A specification number in this column indicates that the alloy as made by Multicore Solders Ltd. complies with that standard. For composition limits and maximum permissible impurities, reference should be made to the standards themselves.

MELTING RANGE : For explanation of the terms 'solidus' and 'liquidus' see Section 2.4.2. For conversion to °F, see Table 3.4.1. Data taken from the relevant standards.

U.T.S. : Ultimate tensile strength in tons force per square inch and in newtons per square millimeter.

reference is made to this table in Sections 2.4.1 and 2.8.2