



Industry Number	TEMP Logistic	TEMP Soltus	TEMP Pacrus	Electrical Conductivity (1.72x10 <sup>10</sup> ohm-cm)	Thermal Conductivity (@ 20°C)	Coefficient Expansion (@ 20°C)	Tensile Strength	Shear Strength	Young's Modulus	Elongation	Birnell Hardness	Label Heat of Fusion	Specific Heat SOLID LIQUID	Notes	
															Logistic
244	227 E	227 99.3 Sn	6.1 Cu	441	441	0.2847	7.31								
148	241	185 88.0 Pb	46.0 Sn	448	366	0.2933	8.17								Anticorrosive/Lead
206	231	107 80.0 Pb	40.0 Sn	448	367	0.3380	9.30								Lead-free alloy, no Potent
127	242	179 88.0 Pb	37.0 Sn	450	364	0.2893	7.28	5.2	19	26	5000				Minimizes gold leaching characteristics. Good thermal fatigue properties
128	232 MP	100.0 Sn		450	360	0.2830	7.28	15.8	73	24	1900				0.222
228	235 MP	98.0 Sn	25.0 Ag	451	365	0.2819	7.28								
130	237	143 98.0 Sn	19.0 Ag	459	289	0.2724	7.54	22.1	87	15	1650	1800	61	2.7 note 2	Has nearly the wettability and low temperature malleability of indium. Solders silver, lead glass, and ceramics. Large plastic range
131	238	183 98.0 Sn	4.0 Sn	460	361	0.3125	8.26								High temperature electrical solder
132	240	221 97.0 Sn	5.0 Ag	460	400	0.2823	7.28	10.1	44	25	540	4500	3.24	25	12
133	240	235 98.0 Sn	5.0 Sn	464	400	0.2819	7.28	11.9	28	31	6000	6000	38	13.1	0.23
134	243	185 88.0 Pb	39.0 Sn	477	361	0.3432	8.50								Lead-free, used in food equipment, potable water systems, and refrigeration tubing. Good wettability and creep resistance
135	247	183 88.0 Pb	39.0 Sn	477	459	0.3738	9.35								
136	247	183 88.0 Pb	39.0 Sn	482	365	0.3479	8.63								
139	251	134 98.0 Sn	1.0 Sn	484	273	0.3453	9.64								
210	253	179 70.0 Pb	21.0 Sn	487	364	0.3565	9.84								
231	255	245 88.0 Pb	10.0 Sn	491	473	0.3749	9.86	6							
541	257	183 70.0 Pb	34.0 Sn	496	361	0.3512	9.72	9.3	41	26	5000	4000	3.05	18	12
142	260	179 88.0 Pb	47.0 Pb	500	354	0.3201	8.66								
16	260	240 70.0 Pb	26.0 Sn	500	464	0.3802	9.97	4.6	18	26	5400	3520	47.5	10.2 note 2	Minimizes gold leaching characteristics. Good thermal fatigue properties. Very good resistance to alkaline corrosion
143	260	222 98.0 Pb	16.0 Sn	500	498	0.3920	10.60								
144	263	194 72.0 Pb	24.0 Sn	504	363	0.3870	8.88								
252	266 E	205 82.0 Cd	17.0 Zn	511	511	0.3017	8.35								Limited production
146	268	183 70.0 Pb	26.0 Sn	514	361	0.3599	9.96								
146	270	184 70.0 Pb	26.0 Sn	516	363	0.3971	10.16								
148	271 MP	100.0 Sn		520	402	0.3841	9.80								
239	272	250 98.0 Sn	10.0 Sn	522	402	0.2916	7.24								
169	276	240 88.0 Pb	18.0 Sn	527	500	0.3711	10.27	4.5	17	27	5500				Minimizes gold leaching characteristics. Good thermal fatigue properties. Very good resistance to alkaline corrosion
149	280	183 88.0 Pb	25.0 Sn	528	361	0.3568	10.21	8.7	27	27	4800	3000	2.9	20	11
152	285	239 92.0 Pb	8.0 Sn	545	462	0.3609	10.82								0.15
152	285	239 92.0 Pb	8.0 Sn	550	358	0.3542	10.81								Very strong solder with excellent thermal fatigue resistance. Excellent solder to use when soldering to gold. High thermal conductivity
154	289	179 87.0 Pb	40.0 Sn	552	354	0.3348	9.28								
155	292 MP	98.0 Sn	5.0 Ag	555	315	0.3595	10.76	8.5	27	29	4500	4470			
155	292 MP	98.0 Sn	5.0 Ag	558	315	0.3974	11.00	25	27						0.143
157	295	252 98.0 Sn	10.0 Sn	563	498	0.3980	10.99								
141	295	221 98.0 Sn	2.0 Ag	565	549	0.3969	11.00	8.6	39	4210	2240	2			0.13
159	300	227 97.0 Sn	3.0 Cu	572	441	0.2845	7.32								
159	302	208 98.0 Sn	1.0 Sn	576	507	0.3994	11.08	8.8	21	30	4400	2400	2.78	30	10
242	302	275 88.0 Pb	16.0 Sn	579	527	0.3884	10.73	8.9	25	29	4400	2400	2.78	30	10
141	303 E	303 88.0 Pb	23.0 Sn	579	527	0.4094	11.30	8.6							
163	304 MP	299 98.0 Pb	2.5 Ag	579	570	0.4047	11.20								
221	304 MP	98.0 Sn	2.0 Sn	579	570	0.4000	11.07								
165	309 E	302 97.0 Pb	1.5 Ag	588	588	0.4075	11.28	8	23	30	4420				23
152	310	240 88.0 Pb	26.0 Sn	590	584	0.3125	11.00	8.6	25	27	3780	3180			23
164	310	300 92.0 Pb	6.0 Sn	590	572	0.3982	11.02	5.5	25	25	4500	2850			23
1611	312	308 98.0 Pb	8.0 Sn	594	586	0.3998	11.08	8.8	21	30	4400	2400			45
11	313	300 98.0 Pb	6.0 Sn	595	572	0.3998	11.08	5.1	21	29	4310	3220			62
238	313 E	313 88.0 Pb	4.0 Sn	595	566	0.3992	11.06								
167	315 MP	300 98.0 Pb	1.2 Sn	595	572	0.4047	11.20								
168	320	300 98.0 Pb	1.2 Sn	608	572	0.4047	11.20								
169	322	310 98.0 Pb	1.5 Sn	612	590	0.4057	11.23								
139	327 MP	100.0 Sn		620	448	0.4163	11.38	7.9	35	29	1800	1800	2.61	55	4
172	330	231 98.0 Sn	3.0 Ag	626	448	0.3818	7.28								
173	345	232 98.0 Sn	7.0 Cu	630	448	0.2823	7.28								
181	356 E	356 88.0 Au	12.0 Cu	671	673	0.3100	14.87								
184	383 E	383 88.0 Au	1.0 Sn	685	686	0.3594	16.40								
155	384	385 88.0 Au	0.0 Ag	687	591	0.4045	11.30								
229	388	304 94.0 Pb	5.0 Ag	689	579	0.4101	11.30	6	23	30	4420				
186	392 E	392 88.0 Au	0.0 Ag	720	720	0.3365	8.00								
185	395 E	340 98.0 Cd	5.0 Ag	743	644	0.3154	8.73								
186	424 E	424 88.0 Au	4.0 Ag	750	720	0.3740	9.71								
177	445	451 72.0 Au	28.0 Sn	869	844	0.4950	13.70								
176	445	451 82.0 Au	18.0 Sn	905	844	0.5303	16.90								
187	529 E	529 48.0 Ag	34.0 Au	977	977	0.3823	10.58								
188	577 E	577 88.0 Al	11.0 Sn	1,071	1,071	0.0901	2.96								
199	585	521 88.0 Al	14.0 Sn	1,085	970	0.0994	2.58								
199	610	577 88.0 Al	3.0 Sn	1,130	1,071	0.0956	2.68								
216	620	605 48.0 Ag	24.0 Cu	1,148	1,131	0.0291	0.15								
181	630	600 88.0 Au	1.0 Sn	1,169	1,071	0.0972	2.69								
214	635	626 98.0 Ag	16.0 Cu	1,175	1,167	0.0320	0.19								
217	650	600 88.0 Au	23.0 Cu	1,202	1,148	0.0328	0.21								
192	660 MP	100.0 Al		1,220		0.0078	0.20								
218	690	630 88.0 Au	16.0 Cu	1,274	1,166	0.0328	0.21								
219	700	605 88.0 Ag	24.0 Cu	1,302	1,131	0.0308	0.22								
179	705	603 88.0 Au	24.0 Cu	1,301	1,117	0.0420	0.48								
211	705	640 88.0 Cu	19.0 Ag	1,301	1,194	0.0703	0.62								
212	710	605 88.0 Ag	27.0 Cu	1,302	1,121	0.0169	0.27								
214	726	603 88.0 Au	29.0 Cu	1,308	1,172	0.0445	0.36								
183	780 E	780 72.0 Ag	28.0 Cu	1,438	1,438	0.3817	10.01								
220	788	778 88.0 Au	0.0 Ni	1,440	1,427	0.3817	10.01								
194	800	370 98.0 Au	2.0 Sn	1,472	698	0.6113	16.22								
221	800	800 88.0 Au	20.0 Cu	1,472	1,240	0.3938	9.75								
195	890 E	890 88.0 Au	20.0 Cu	1,634	1,634	0.5962	15.67								
196	890 E	890 88.0 Au	18.0 Cu	1,742	1,742	0.5702	15.00								
227	981 MP	100.0 Ag		1,762		0.3794	10.50								
248	985	885 88.0 Cu	4.0 Sn	1,848	1,250	0.0505	0.87								
198	1020	1000 88.0 Au	50.0 Ag	1,888	1,832	0.4914	13.95								