

Solder Alloy Properties Table

For Soft Solder Wire

Mechanical Properties for Lead-Based and Lead-Free Alloy

Alloy	Liquidus – Solidus Temperature (°C)		Thermal Conductivity (W/m°K)	Coefficient of Expansion (μ/°K) (85-150°C)	Elongation (%)	Density (g/cm ³)	Hardness (HV) (100mN/5s)	Tensile Strength (MPa)	Electrical Resistivity (μΩ.cm)	Electrical Conductivity (S/m) (x10E+06)
PbSn1Ag1.5	305	298	30	27	20 - 26	11.18	12.3	30 - 35	20.95	4.77
PbSn2Ag2.5	304	297	43	25	28 - 34	11.03	11.5	27 - 32	21.21	4.71
PbSn5Ag1.5	299	290	41	25	31 - 37	10.95	10.5	27 - 32	20.50	4.88
PbSn5Ag2.5	300	292	47	25	32 - 38	10.95	10.3	30 - 35	21.07	4.75
PbSn10Ag2	288	278	48	17	30 - 40	10.61	10.2	20 - 25	20.11	4.97
PbSn5	304	298	40	26	33 - 39	11.00	8.6	25 - 30	21.29	4.70
PbIn5Ag5	309	300	35	19	23 - 29	10.93	14.1*	37 - 42	24.23	4.13
SnSb5	243	228	41	25	19 - 25	7.19	25.1	40 - 45	16.50	6.06
SnAg20	207	198	67	14	19 - 25	7.83	19.3 [#]	48 - 53	12.33	8.11
SnAg25Sb10	276	218	39	14	1 - 6	7.92	43.1 [#]	115 - 120	16.14	6.20
Test Reference	ASTM D3418		ASTM E1461	ASTM E831	ASTM F72	ASTM B962 -08	ASTM E384-11	ASTM F72	ASTM B193-16	Calculated

* - 200mN/5s,
- 300mN/5s

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Americas

Phone +1 610 825 6050
electronics.americas@heraeus.com

Asia Pacific

Phone +65 6571 7649
electronics.apac@heraeus.com

China

Phone +86 53 5815 9601
electronics.china@heraeus.com

Europe, Middle East and Africa

Phone +49 6181 35 4370
electronics.emea@heraeus.com

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Heraeus Electronics GmbH & Co.KG, 63450 Hanau, Germany
Web: www.heraeus-electronics.com

Technical Data Sheet | File Name: Soft_Solder_Wire_Alloy_Composition_Table
Document Number: HET25016-0323-4