GLUDITEC
Glue & Dispensing Technology

Technical Data Sheet

SAC305-1212

Lead-free solder wire SAC305

SAC305-1212 Lead-free solder wire is mainly made of high-purity tin, supplemented with high-purity silver & copper, refined by using the most advanced professional equipment of lead-free solder and excellent technology through special process. It is designed to avoid the rapid expansion of microcracks in the brittle interface organization and improve the creep-fatigue life of joints. Alloy ratio of the product is reasonable; flux is prepared of high-quality improved resin, organic activator and a variety of additives. It is an environmentally friendly lead - free solder wire with excellent welding performance in lead-free process.

FEATURE

- The packaged solder wire is flat, smooth, uniform.
- Distribution of flux is uniform and continues. No broken core.
- Excellent electric conductivity and thermal conductivity, fast speed of tin penetration,
- No pungent smell, less smoke and small splash when soldering.
- Low residue after soldering, uniform spreading, quick drying.
- High surface insulation resistance, stable and reliable electrical properties.
- Comply with RoHS requirement.

APPLICATION

SAC305-1212 Lead-free solder wire is widely applied to communication devices, instrument equipment, automobile industry equipment, audio devices, household electrical and electronic appliances, placement and rework operation of components and manual and automatic soldering of other high reliable electronic products.

TYPICAL PROPERTIES

Properties	Value	Method
Part number	SAC305-1212	/
Metal Alloy	Sn96.5/Ag3.0/Cu0.5	/
Appearance	Silvery white, smooth and clean surface, no crack.	Visual Inspection
Diameter(mm)	0.1;0.15;0.2;0.25;0.3;0.35;0.4;0.45;0.5;0.6;0.8;1.0;1.2;1.5;2.0;2.5;3.0	GB/T 20422-2006 5.5
Shelf Life	2 years	From MGF Date
Packaging	50g/Roll, 100g/Roll,0.5kg / Roll, 1kg / Roll, 1kg / Box, 10kg / Box	/

TECHNICAL SPECIFICATION

Items	Technical	Standards
Density (g/cm^3)	7.4	/
Content of Flux (wt %)	2.0±0.5 2.5±0.5 3.0±0.5	IPC-TM-650 2.3.34.1
Melting point (℃)	217	/
Copper Mirror Test	Non-penetrating corrosion	IPC-TM-6502.3.32
RoHS	Passed	RoHS Directive
Continuity of Flux Distribution, Broken Hole	Continuity, No Broken Hole	GB/T 20422-2006 5.7/5.8
Copper Corrosion Test	No significant Corrosion	IPC-TM-6502.3.32
Content of Halogen	L1	IPC-TM-650 2.3.33
Expansion rate (%)	≥75	JIS-Z-3197 8.3.1.1
Residue dryness	PASS	IPC-TM-650 2.4.47

ALLOY COMPOSITION

No.	Items	CAS. No,	Content(%)
1	Tin (Sn)	7440-31-5	Surplus Quantity
2	Silver (Ag)	7440-22-4	3.0±0.2
3	Copper（Cu）	7440-50-8	0.5±0.1
4	Lead（Pb）	7439-92-1	≤0.10
5	Iron（Fe）	7439-89-6	≤0.02
6	Bismuth（Bi）	7440-69-9	≤0.10
7	Stibium（Sb）	7440-36-0	≤0.10

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8	Indium（In）	7440-74-6	≤0.10
9	Zincum (Zn)	7440-66-6	≤0.001
10	Aurum (Au)	7440-57-5	≤0.05
11	Nickel（Ni）	7440-02-0	≤0.01
12	Aluminum（Al）	7429-90-5	≤0.001
13	Cadmium（Cd）	7440-43-9	≤0.002
14	Arsenic（As）	7440-38-2	≤0.03
Applied Standard: GB/T 20422-2006			

DIRECTION OF USE

- Select appropriate size of ferrochrome head according to the actual welding needs.
- The recommended set temperature of ferrochrome head is 380 ± 20℃, in order to reduce the occurrence of splashing tin phenomenon.
- It is recommended to clean ferrochrome head after using for some time during welding, because a large number of tin oxide and flux residues in ferrochrome head surface attachments are easy to have adverse effects on the welding.
- It is recommended to weld at nitrogen atmosphere under conditions permitting, in order to inhibit the oxidation of base metal and solder wire and improve the welding results.
- Personal protective equipment must meet the working range safety norms; wear protective clothing and mask, so as not to scald by splashing liquated solder. Please refer to product MSDS for more safety information.