

## SAC0307-1215

### Lead-free Solder Wire

SAC0307-1215 Lead-free solder wire is mainly made from the high purity tin ingot supplemented with high purity of silver and copper, refined by using the most advanced lead-free solder professional equipment and excellent technology through special process. 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 and other environmental requirements.

### APPLICATION

SAC0307-1215 widely applied to communication devices, instrument equipment, automobile industry equipment, audio devices, household electrical and electronic appliances and manual and automatic soldering of other high reliable electronic products

### TYPICAL PROPERTIES

Items	Technical	Standards
Part number	SAC0307-1215	/
Metal Alloy	Sn99.0/Ag0.3/Cu0.7	/
Appearance	Silvery white, smooth and clean surface. No crack	Visual Inspection
Diameter (mm)	0.3;0.5;0.6;0.8;1.0;1.2;1.5;2.0;2.5;3.0;3.5	GB/T 20422-2006 5.5
Shelf Life	2 year	From MGF date
Packaging	1kg/Roll,0.5kg/Roll,10kg/Box	

### TECHNICAL SPECIFICATION

Items	Technical	Standards
Density (g/cm <sup>3</sup> )	7.3	/
Content of Flux (wt%)	2.0±0.5 2.5±0.5 3.0±0.5 3.5±0.5	IPC-TM-650 2.3.34.1
Melting point (°C)	217-227	/
Copper Mirror	Non penetrating corrosion	IPC-TM-650 2.3.32
Test RoHS	PASS	RoHS
Continuity of Flux Distribution, Broken Hole	Continuity, no broken hole	GB/T 20422-2006 5.7/5.8
Copper corrosion	No significant corrosion	IPC-TM-650 2.6.15
Test 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

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#### CONTENT OF ALLOY COMPOSITION

No.	Items	CAS. No.	Content(%)
Key Metal Alloy			
1	Tin (Sn)	7440-31-5	Surplus Quantity
2	Silver(Ag)	7440-22-4	0.3±0.1
3	Copper (Cu)	7440-50-8	0.7±0.1
Impurity Limit			
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
8	Indium (In)	7704-74-6	≤0.10
9	Zincum (In)	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)	7740-38-2	≤0.03

#### APPLICATION GUIDE

- Select ferrochrome head with appropriate aperture according to actual welding needs.
- The recommended set temperature of ferrochrome head is  $350 \pm 20^{\circ}\text{C}$ , 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

The data contained in this bulletin is provided only as a guide for evaluation/consideration. These material characteristics are typical properties that are based on a limited number of samples tested in the laboratory. We cannot assume responsibility for results obtained by others over whose methods we have no control. It is the user's responsibility to determine suitability for the user's purpose of any product or method. We recommend that each prospective user test his proposed application before repetitive use, using this data as a guide.