

## SnSb12-1210

### Lead-free High-temperature Solder Wire

The SnSb12-1210 Lead-free High-temperature solder wire is composed primarily of pure tin with added high-purity antimony, and it has been refined using advanced professional equipment for lead-free soldering. The product also features an optimized alloy ratio and a high-quality flux made from improved resin, organic activator, and various additives. Overall, this environmentally friendly lead-free solder wire delivers outstanding welding performance in high-temperature manufacturing thanks to its exceptional technology and special processing methods.

### FEATURES

- 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

The SnSb12-1210 Lead-free solder wire is extensively utilized for welding high temperature components, electronic components in high temperature operating environments, and segmented welding.

### TYPICAL PROPERTIES

Items	Technical Parameters	Standards
Part Number	SnSb12-1210	/
Metal Alloy	Sn88/Sb12	/
Appearance	Silvery white, smooth and clean surface, no crack.	Visual Inspection
Diameter (mm)	0.5; 0.6; 0.8; 1.0; 1.2; 1.5; 1.8; 2.0;	/
Shelf Life	2 years	From the date of production
storage	Place at room temperature, dry and non-corrosive environment	From the date of production
Packaging	500g / Roll, 5kg/Box	/

Items	Technical Parameters	Standards
Content of Flux (wt %)	0.0±0.0/2.0±0.5 2.5 ±0.5/3.0±0.5 3.5±0.5	IPC-TM-650 2.3.34.1
Melting Point (°C)	260	/
Copper Mirror Test	Non-penetrating corrosion	IPC-TM-650 2.3.32
RoHS	Pass	RoHS Directive
Continuity of Flux Distribution, Broken Hole	Continuity, No Broken Hole	/
Copper Corrosion Test	No significant Corrosion	IPC-TM-650 2.6.15
Content of Halogen	L1	IPC-TM-650 2.3.33
Expansion Rate (%)	≥70	JIS-Z-3197 8.3.1.1
Residue Dryness	PASS	IPC-TM-650 2.4.47

## ALLOY COMPOSITION

No.	Items	CAS. No.	content(%)
Key Metal Alloy			
1	Tin (Sn)	7440-31-5	Surplus Quantity
2	Stibium (Sb)	7440-36-0	11-13
Impurity Limit			
3	Lead (Pb)	7439-92-1	≤0.10
4	Iron (Fe)	7439-89-6	≤0.02
5	Copper (Cu)	7440-50-8	≤0.05
6	Bismuth (Bi)	7440-69-9	≤0.10
7	Indium (In)	7440-74-6	≤0.10
8	Zincum (Zn)	7440-66-6	≤0.001
9	Aurum (Au)	7440-57-5	≤0.05
10	Silver (Ag)	7440-22-4	≤0.01
11	Aluminum (Al)	7429-90-5	≤0.001
12	Cadmium (Cd)	7440-43-9	≤0.002
13	Arsenic (As)	7440-38-2	≤0.03

## DIRECTION OF USES

- Select appropriate size of ferrochrome head according to the actual welding needs.
- The recommended set temperature of ferrochrome head is  $400 \pm 20^{\circ}\text{C}$ , in order to reduce the occurrence of splashing tin phenomenon.
- 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.
- 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.