Features

- Flux system is especially designed for lead-free solder powder (Sn/Ag/Cu system).
- Reduce effectively free energy between lead-free solder molecular and surface tension, and increase flowability and solderability of lead-free solder.
- Excellent continuous printing performance especially suitable for fine-pitch printing, good performance of off- grid into model and strong adhesion.
- Wide reflow profile window: allows excellent solderability in wide reflow temperature area.
- Excellent solderability and tin penetration performance. The solder joints are full andbright.
- Few residues, no-clean, excellent ICT test performance and high Surface Insulation Resistance.
- Materials comply with RoHS requirement.

Scope of application

WTO-LF4000A-DY delivers good soldering on PCB boards of bare Cu, Immersion gold, Immersion Sn and OSP surface treatment and other lead-free solder alloy components. It is widely applied to computer main board telephone main board, MP3, MP4, communication devices, audio devices, refrigeration devices, Vehicle equipment, instrumentation, medical appliances and other electronic devices with high reliability and high quality.

Technical Table

Project	Technical indicators	Applicable standards
Alloy composition	Sn96.5Ag3.0Cu0.5	/
	Sn98.5Ag1.0Cu0.5	/
	Sn99.0Ag0.3Cu0.7	/
	SnAg0.3Cu0.7X	/
Powder size	20-38μm	/
	25-45μm	/
	15-25μm	/
Viscosity(Pa.s)@25±0.2℃	150-250 (10rpm/min)	Malcom PCU 205
Metal content(%)	88.80±0.50	IPC-TM-650 2.2.20
Flux Content (%)	11.20±0.50	IPC-TM-650 2.2.20
Solder ball test	Pass	IPC-TM-650 2.4.43

Wetting test	Pass	IPC-TM-650 2.4.45
Slump Test	Pass	IPC-TM-650 2.4.35
Halogen Content	HF	EN 14582:2016
Soldering paste type	ROL1	IPC J-STD-004B
Electrochemical Migration (ECM)	Pass	IPC-TM-650 2.6.14.1
Copper mirror test	Pass	IPC-TM-650 2.3.32
SIR(168h,@85℃, 85%RH）	≥1×10^{8}	IPC-TM-650 2.6.3.3
RoHS	Pass	RoHS Directive

Safety

When used in typical reflow, it will generate a small amount of volatile vapors which should not diffuse in work area. For more information, please refer to the Material Safety Data Sheet (MSDS).

Processing Guidelines

1. Storage & Handling Procedures

- The shelf life of this product is 6 months when stored at 0-10℃ under seal.
- Solder Paste should be allowed to reach ambient working temperature prior to use. Generally, the “warm- up” time is at least 4 hours.
- To ensure uniform distribution of any separated material resulting from storage, it should better to mix solder paste for 1-3 minutes by mixer before using. The specific mixing time depends on stirring speed, ambient temperature etc.
- Do not store new and used solder paste in the same container. The container of solder paste should be re-sealed after using. Suggested use within 12 hours after open.

2.Printing

WTO-LF4000A-DY the recommended printing parameters are as follows:

- Scraper: Polyurethane or stainless steel scraper
- Scraper printing angle: 40° - 60°
- Printing method:Manual, semi-automatic or fully automatic printing machine printing
- Printing speed: 20~100mm/s
- Stencil Residence Time As soon as possible to complete the components assembly and welding, residence time not more than 8 hours
- Temperature/Humidity Temp.25±3℃, Humidity 50±10% RH

3.Package

500g / Bottle, 100g/each, 200g/each, special weight can package according to customer's request.

4.Reflow curve (measured temperature of the welded surface)

Figure 1

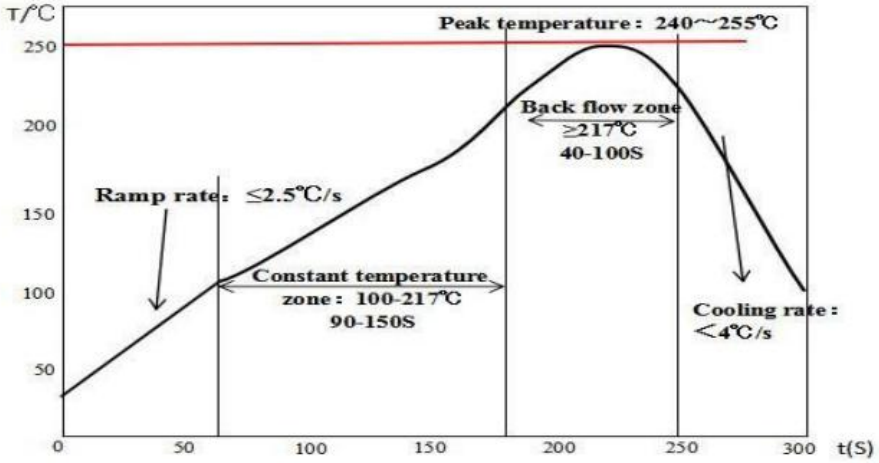
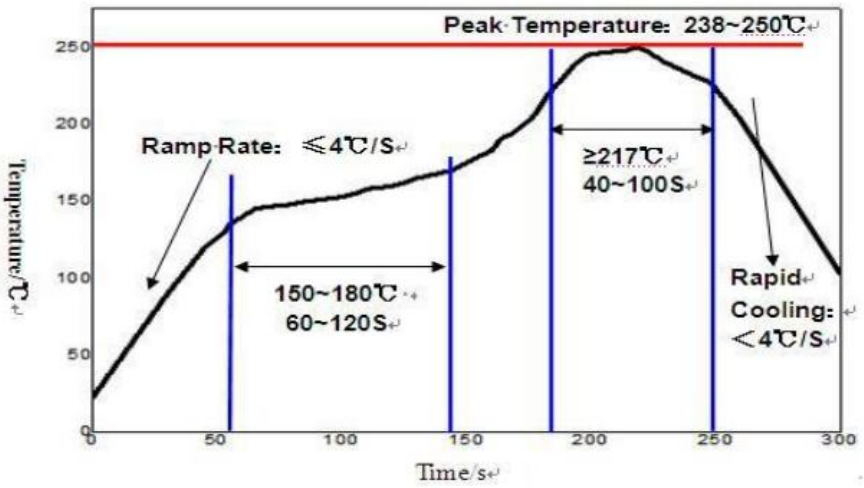


Figure 2



Note: Ideal reflow profile depends on many factors, such as PCB layers, circuit board on the thermal properties of materials and components, circuit board components distribution density etc.; Therefore, according to the actual production situation optimize the furnace temperature curve, in order to obtain the best welding effect.