



Shenzhen Jufeng Solder Co., Ltd.

Product Instruction

JF-800901
Solder Paste Sn63Pb37

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1. Application :

Consumer electronics, this file is provided by Shenzhen Jufeng Solder Co., Ltd. only for our customers.

2. Sorts and Chemical compositions

Sort	Chemical composition (wt.%)								
	Sn	Pb	Sb	Cu	Bi	Zn	Fe	Al	Cd
Sn63-Pb37	63±0.5	37±0.5	<0.20	0.08	<0.1	0.03	<0.02	<0.005	<0.002

3. Physical Characters

Sort	Melting Point(°C)	Spec. Gravity(g/cm ³)	Tensile Strength (MPa)
Sn63-Pb37	183	8.4	52

4 Package

500g/bottle; 30g/100g or other quantity in syringe;

Standard package for 500g/bottle: 20 bottles per carton;

Carton size: 34.5*27.5*23.5cm

Technical Data Sheet

Specification: Tin Lead Solder paste Sn63Pb37

P/N: JF800901

Alloy: Sn63-Pb37

4.1 Introduction

JF800901 series are ROL1 and based on no clean solder paste. Especially designed on no clean after soldering and residues are indecomposable.

4.2 Features

4.2.1 Printing off the tin liquidity is good, for as low as 0.3mm pad pitch can be done fine printing

4.2.2 Continuous printing, the viscosity change less, actionable steel long time, more than 8 hours will not change the viscosity, while still maintaining the continuous printing results.

4.2.3 After printing a few hours to maintain its original shape, printed graphics without collapse, no effect on the patch component.

4.2.4 Very little residue after soldering, solder joint on the light and has a large tin full of insulation resistance, will not corrode PCB, the requirements can be achieved disposable.

4.2.5 AOI test has better performance, no miscarriage of justice.

4.2.6 Solve the difficult problems of BGA solder Weld

4.3 Standard Paste Composition

Application Characteristics	IPC ALLOY POWDER TYPE	Alloy powder size	Alloy powder content
Standard Printing	3	25~45 μm	89 %
Fine pitch printing	4	20~38 μm	88.5 %
Drip	3	25~45 μm	85 %

4.4 Physical Properties

(Application 89%, Sn63-Pb37, -325+500 Alloy powder soldering paste)

- Viscosity range
200±20 Pa.S (Malcom Viscometer: 10 rpm @ 25°C)
- Solder ball test: **qualified**
Test standard J-STD-005, IPC-TM-650, Method 2.4.43
- Wet test: **qualified**
Test standard J-STD-005, IPC-TM-650, Method 2.4.45

4.5 Reliability Properties

(Application 89%, Sn63-Pb37, -325+500 Alloy powder soldering paste)

- Copper mirror test: **qualified (low)**
Test standard IPC J-STD-004, IPC-TM-650, Method 2.3.32
- Copper surface corrosion test: **qualified (low)**
Test standard IPC J-STD-004, IPC-TM-650, Method 2.6.15
- Halogen Content Test
 - a. Silver Chromate test paper test: **qualified**
Test standard IPC J-STD-004, IPC-TM-650, Method 2.3.33
 - b. Fluoride point test: **qualified**
Test standard IPC J-STD-004, IPC-TM-650, Method 2.3.35.1
- Surface Insulation Resistance: **qualified**
Test standard IPC J-STD-004, IPC-TM-650, Method 2.6.3.3

	0 (hour)	96 (hours)
IPC TM-650	$> 1 \times 10^{12}$ ohm	$> 1 \times 10^{11}$ ohm

4.6 Application Notes

4.6.1 Usage

JF800901 series for Sn63Pb37 solder alloy. No. 3 alloy powder is recommended, but according to different purposes such as standard and ultra fine pitch printing require use of different types of IPC alloy powder.

4.6.2 Printing parameters

- Printing scraper 80~90 Shore hardness polyurethane or stainless steel
- Scraper velocity 25~150 mm/sec
- Template material Stainless steel, molybdenum, nickel or brass
- Temperature and humidity Tem.: 70-77°F (21-27 °C) ,Humidity: 35-65% R.H.

4.7 Reflow Data

Pre-Heat to 155 °C	Soak 155 - 183°C	Peak 220 ±5°C	Reflow 183-220-183°C	Cooling 183-<40°C
60—90 sec	60—90 sec		30—50 sec	180 sec
1-2.5 °C/sec	0.5-0.6°C/sec		1.3-1.6°C/sec	0.8-1°C/sec

Sheet 1 Recommended reflow process parameters

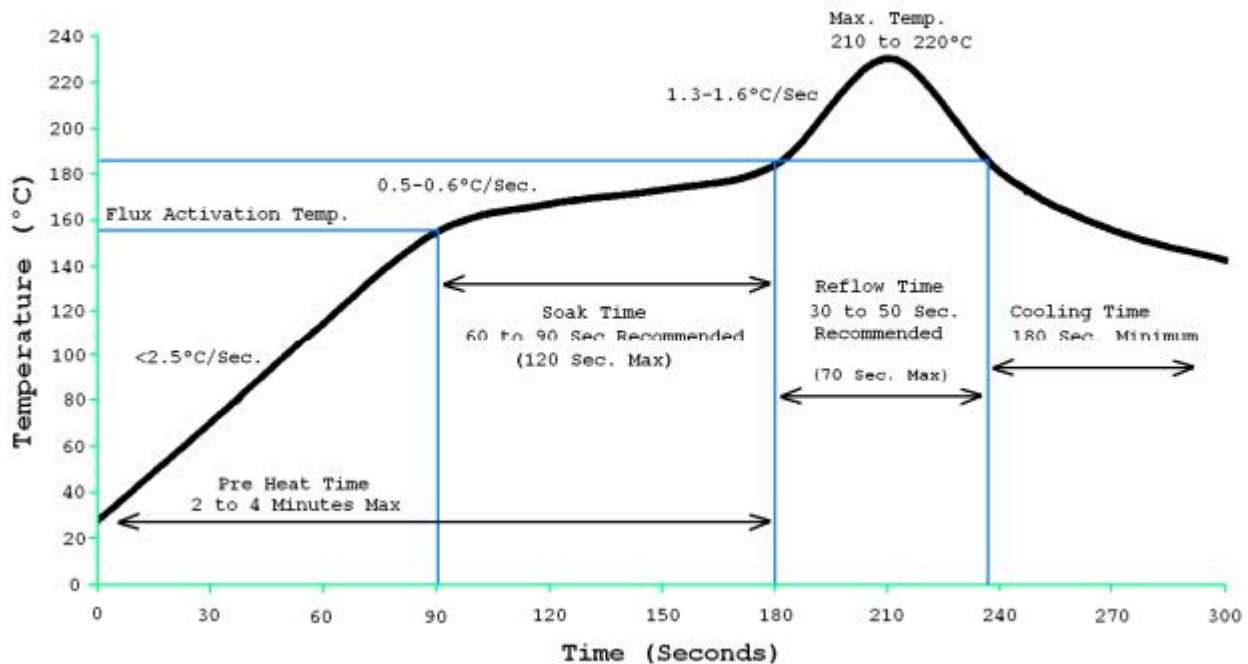


Fig. 1 Recommended reflow soldering temperature profile
(This picture is for reference only)

4.8 Cleaning

Post-weld cleaning

- JF800901 series is no cleaning solder paste in general, not having to clean the residue after welding.
- For cleaning JF800901 series of solder paste residues after welding is also very easy to correspond with the washing detergent

4.9 Storage, handling and shelf life

- In general, JF800901, solder paste is stored in 2 °C -8 °C temperature refrigeration, Shelf life: six months (starting from the date of manufacture), goods should follow the FIFO principle.
- Open the package using the solder paste is necessary before fully warmed to room temperature (recommended for 4 hours); return temperature for 48 hours in the retention period, after opening a period of 12 hours, stay in the solder paste reflow PCB board to have pre- idle time is 100 ± 20 minutes.
- Cold storage may cause the separation of components within the solder paste, solder paste is stirred well before use 3 to 5 minutes to re-mix. (Recommended: automatically stir 3 ± 0.5 minutes, hand-mixing 5 ± 1 minute, mixer speed: revolution 400rpm, rotation 100rpm)
- Do not use the leftover paste mixed with the new packaging in the same bottle. Without the use of solder paste should be re-sealed, when the cap can not be sealed very well replace the cap when the sealing liner to ensure that as much as possible.

4.10 Safety information

- Paste in the operation or use of the process may be harmful to health or the environment.
- Please read before using the product Material Safety Data Sheet to understand the relevant considerations.

Attachment: Test report

Item: JF800901
Flux type: ROL1
Date of test raw data: 20/03/2021

Test item	According to rules		IPC-TM-650 Test method		Test Requirement			Test result		
Metal content	3.4		2.2.20		89.5-90.5 %			89.5 %		
Viscosity	3.5	Malcom PCU 205	2.4.34.3		190~230 Pa.s			195-220		
Collapse	3.6				No bridge			qualified		
solder ball	3.7		2.4.43		No clusters or large ball			qualified		
expansion rate			4.7.7.2.2					92 %		
copper mirror test	3.2.4.1		2.3.32		< 50% penetrate			qualified		
Halogen test			3.2.4.2							
silver chromate test paper test	3.2.4.2.1		2.3.33		No color change			qualified		
Fluoride point test	3.2.4.2.2		2.3.35.1		No color change			qualified		
Corrosion of copper surface	3.2.4.4		2.6.15		Acceptable minor corrosion			qualified		
Surface Insulation Resistance	3.2.4.5				2.6.3.3	0 Hour		$>1.00 \times 10^8$	1.09×10^{12}	
						96hours		$>1.00 \times 10^8$	1.38×10^{11}	
Alloy composition (wt%)	Sn	Sb	Bi	Cu	As	Pb	Fe	Zn	Cd	Al
	63	0.011	0.008	0.4-0.6	0.005	37	0.02	0.001	<0.002	0.02

Material Safe Data Sheet

1. PRODUCT INFORMATION

Product Name: JF800901 Solder Paste Sn63Pb37

MSDS No.: MSDS- JF800901—Sn63Pb37

Usage: flux and solder alloy powder mixture, for electrical and electronic industry

2. COMPOSITION / INFORMATION ON INGREDIENTS

Composition	CAS #	(wt%)	OSHA PEL mg/m ³	TLV-TWA mg/m ³	TLV-STEL mg/m ³
Sn	7440-31-5	63	2.0	2.0	Not quite clear
Pb	7439-92-1	37	0.01	0.1	Not quite clear
modified rosin	8050-09-7	3.0-4.5	N.E.	N.E.	No
security components	*	2.0-6.0	N.E.	N.E.	N.E.

3. HAZARDS IDENTIFICATION

Appearance	Solid paste
Emergency overview	Using the fumes will have a stimulating effect.May cause allergic skin reaction
The may way	○ Skin ⊙ eyes ⊙ inhale ⊙ ingestion
influence objects	Flux fumes: eyes ,mucous membranes, respiratory system
Potential health effects (short-term exposure)	
Inhale	Generated during use of the flux fumes and respiratory mucosa
Eyes	Smoke may have a temporary minor eye irritation. Corneal damage is unlikely.
Skin	May cause slight skin allergy
ingestion	May cause harm, most paste will be eliminated out from the body and not absorbed.
<i>Shin absorption</i>	impossible
Potential health effects (long term)	
Inhalation or ingestion of solder paste during the flux generated by the smoke may cause harm. Of skin irritation. Irritating to eyes.	
Toxicological information section 11	
Note: his product is not recommended for ordinary consumers	

4. FIRST AID MEASURES

Eyes: Flush eyes with plenty of water

Skin: Flush or shower to wash away

Inhale: Contact in this manner should not cause harmful effects. Away from smoke exposure

Ingestion: If swallowed, seek medical help. Unless under the guidance of medical personnel, or do not induce vomiting

Doctors Note: no special antidote. Should be given care. Doctors need to make judgments based on the patient's response. Treatment.

5. FIRE FIGHTING MEASURES

Inflammability Yes No

Flash point not quite clear

Initiation temperature not quite clear

Burning limit not quite clear

extinguishing mediator

water carbon dioxide bubble dry powder fire

dangerous combustion products

Carbon monoxide, carbon dioxide. The thermal decomposition products of solder paste should be considered potentially dangerous products, and to take appropriate measures

explosive possibility Impact - there is no corresponding identity.

the possibility of static free Yes No

Fire instruction

Fire protection equipment use self-contained breathing apparatus and fully protective equipment. Inside the containers and can be Xianghuo the affected area sprinkler to keep it cool, until the flame goes out, without the risk of recrudescence

6. ACCIDENTAL RELEASE MEASURES

Scraper or other tool used to collect solder paste in the appropriate containers. Cloth dipped in solder paste residues may be isopropyl alcohol or other solvent cleaning.

7. HANDLING AND STORAGE

Reserve

Ventilated place. Storage temperature 5 - 10 ° C or so. Storage and dry place.

Product control

Keep container closed when not in products.

Personal Note

Handle with care and attention to personal cleanliness to avoid skin and eye contact. Avoid inhaling flux fumes. Wash hands after using the paste, special attention to fingernails clean solder paste.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering control

In most cases, provide good ventilation can be. Control room temperature and dry handling.

Personal protective equipment

Eyes	Using of safety glasses
Body	Overalls
Breathing system	There should be no need for respiratory protection. Inadequate ventilation is required when using the self-contained breathing apparatus or other equipment.
Hands	Wear rubber gloves to prevent skin contact.
Feet	Not applicable

Personal hygiene: Operation should wash hand thoroughly after chemicals

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (20 °C)	Solid paste	Proportion (水water = 1 at 25 °C)	>7
Boiling point(760 mm Hg)	not applicable	melting point	183°C
Vapor pressure(mm Hg at 20 °C)	not applicable	rate of volatilization(butyl acetate = 1)	<0.1
Vapor density (air = 1)	not applicable	Volatile Volume percent	<1%
Solubility in water(% by weight)	completely insoluble	(VOC)	not applicable
PH	not applicable	threshold odor	not established
freezing point (760 mm Hg)	not applicable	W/O coefficient of distribution	not established
color and odor	slight odor,gray		

10. STABILITY AND REACTIVITY

Chemical stability	Stable in normal term.	Situation should be avoided	Not established
Incompatibility with other materials	React with oxidizing materials		
Toxic decomposition products	Not applicable		
Corrosive	Not applicable		

11. TOXICOLOGICAL INFORMATION

Human toxicity

Use of inhaled or ingested in the process of smoke and / or dust may produce harmful effects. Skin and eye contact may cause irritation hazard

Mutation of the matrix: Not applicable

Cumulative toxic effects

May be blood, kidneys, lungs, nervous system, reproductive system, spleen, brain, digestive system, gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS), eyes, cornea, thyroid gland may produce toxic effects. Long-term exposure may cause organ failure.

12. ECOLOGICAL INFORMATION

Biodegradability Not established

Aquatic toxicity Not established

13. DISPOSAL CONSIDERATIONS

Disposal: All waste must comply with the method of national, provincial / municipal and local laws and regulations, the provincial / municipal requirements for waste disposal would be more restrictive than state regulations or is different. Regulations will vary. Chemicals to add, processing, storage, or other changes in the material so that the table of waste disposal information is incomplete, incorrect or inappropriate. Waste characterization and waste in accordance with the law in the case of waste, waste generation or disposal of the material determine the responsibility of the party. The choice of waste management should not be considered "as handling the arrangements." Not into the sewers, local or any other body of water.

Solder can be recycled together to take advantage of.

14. TRANSPORT INFORMATION

DOT

Non-DOT restricted material. DOT regulatory information, if necessary, may refer to transport regulations.

ADR/RID

Non-ADR restricted material. ADR regulatory information, if necessary, may refer to transport regulations.

TDG

Non-TDG restricted material. TDG regulatory information, if necessary, may refer to transport regulations.

15. Regulatory information

<p>Applicable laws and regulations</p> <p>Production Safety Law</p> <p>Serious accidents on the provisions of administrative responsibilities</p> <p>Fire protection law</p> <p>Hazardous Chemicals Control Ordinance</p> <p>Occupational Disease Prevention Law</p> <p>Use of toxic substances are safety regulations</p> <p>Regulations on Safety Supervision of Special Equipment</p>
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16.Other information		
Ref. Document	AIR PRODUCTS MSDS、INTERN TIONAL MARITIME DANGEROUS GOODS CODE	
Department	Dept. Name: Engineer Department	
	Tel.: 0755-89501348 89501292	
Made By	Title: Manager of Quality Department	Name: Zhenlu Deng
Date Prepared	6 th May. 2021	Revised Date: 28 th May. 2021
		Edition: 10