Title:

Solder Paste Storage, Issuance and Usage

Revision	Description of Change	Date Effective	Author
A	Initial Release	06/04/99	S. Gomez
B	deleted 9.2.1.1 & 9.4.1 modify 9.4.2 & 9.4.5	8/30/99	Peggy Liang
C	Added use of daily solder temperature Log.	8/6/04	Imtiaz Sheikh
D	Added 5.3, 8.4 and 9.2.3	03/02/17	Kiet Pham
E	Modified 9.4.2.3, 9.5.1 and 9.5.2	04/30/18	Kiet Pham
F	Modified 9.2.1, 9.2.2, 9.2.3 & 9.4.2.3, 8.1 Removed 8.4, 8.3,3.1	02/1/2024	Mario Baltier

Originator	Title Name	Title Name

Title:

Solder Paste Storage, Issuance and Usage

1.0 Purpose

1.1 This procedure defines the required handling methods essential for electronic grade solder paste.

2.0 Scope

2.1 The content of this procedure covers all areas of responsibility as they apply to the receiving, storage, issuance, and usage of solder paste.

3.0 References

3.1 Material Safety Data Sheet (MSDS) on each chemical or hazardous substance in use.

4.0 Definitions

4.1 Jar - A plastic container that contains solder paste.

4.2 Flux - Activators in the paste designed to promote solderability.

4.3 Mesh - The particle size.

4.4 Separation - Where the flux (amber color) separates from the paste.

4.5 Solder Paste - Tin/Lead mixture for the assembly of SMT.

4.6 Stencil wipes - Disposable lint-free wipes soaked with solvent used for SMT clean-up.

5.0 Responsibilities

5.1 Receiving and Production departments must understand and follow this procedure.

5.2 The production area will make entries to the Chemicals / Solder Paste Log recording date and time paste is received in SMT and issued to machine operators.

5.3 Engineering is responsible for organizing, checking and clean up (remove the expired products) the storages.

6.0 Equipment

6.1 Plastic bladed spatula

6.2 Refrigerator - (for storage of Alpha paste).

6.3 Thermometer

7.0 Materials

7.1 Solder Paste (WS609, Sn63Pb37 & WS619, WS820 Lead-free Sn96.0Ag3.5Cu0.5) or any other solder paste approved by Engineering.

7.2 Stencil wipes

7.3 Dross bucket

7.4 Latex or rubber gloves

8.0 Records

8.1 The total retention period for the documents listed below is indicated on the Master Forms Listing (PDOC025) under the column heading, Record Retention. When the records are no longer in active status, they will be forwarded to Document Control and filed/maintained in accordance with SOP 29.

8.2 Solder Paste Log - PMFG118

9.0 Procedure

9.1 Receiving

9.1.1 Receiving shall forward newly received paste to SMT within two hours of receipt.

9.2 Storage

9.2.1 Each jar shall be stored inside the designated refrigerator within two hours of receipt in the SMT area. Enter the "date", "time", “jars received", "balance", and "name" onto the Chemicals / Solder Paste Log. The SMT manager/ Process Technicians is responsible for writing down the “date received” on the leaf cover of each jar and draw a line below to mark “accessible date”.

9.2.2 SMT Engineer and SMT Technician are responsible for verifying the solder paste refrigerator temperature every morning using temperature logger inside the refrigerator at beginning of every shift. Solder pastes storage temperature to be (32-50°F) ± 5°F (as per the solder paste manufacturer specification, all logger data must be kept. In the event of a power outage or refrigerator malfunction that extends for more than 5 days all solder jars must be sent back to the manufacture for exchange.

9.2.3 Engineering is responsible to organize, check and clean up the expired products from the storage on a weekly basis, on form PMFG118.

9.3 Issuing

9.3.1 The SMT manager and Process Technicians are responsible for maintaining an adequate supply of room temperature paste prior to its usage. Refrigerated solder paste must be "staged" for 1-hour minimum at room temperature before use. Enter the "date", "time", "jars used", "balance", "expiration date", and "name" to the Chemicals / Solder Paste Log when a jar is removed from the refrigerator.

9.3.2 The SMT Lead or designee will issue only paste that is within the expiration date labeled on the jar.

9.3.3 The SMT operator should write “accessible date” on the leaf cover.

9.4 Usage

9.4.1 Write the date and time the jar was opened on the jar lid with a pen.

9.4.2 Paste Application to Stencil - Apply enough paste for no more than two hours of production time and at least enough to maintain a good roll in front of the squeegee. Apply paste as required to maintain the good roll.

9.4.2.1 When making a set-up change, if the paste is less than two hours old it must be removed from the stencil (e.g. at the end of shift before a weekend start).

9.4.2.2 All paste must be used for production within 2 days from when the paste was initially put into use. Use FIFO (First-In-First Out) method for use of solder paste.

9.4.2.3 Solder paste needs to be taken out from the refrigerator for at least 6 hours and 4 to 10 minutes of mixing using the spinner machine before being used. Solder paste jars can stay out for 2 days before they are opened to be used. Put date and time on the Jar when taking out from the refrigerator and put the expiry date which should be 2 days from the time it is taken out from the refrigerator. All solder pastes jars need to be logged out on form PMFG118 by SMT Manager or Process Technicians. All solder paste that is taken out from the refrigerator to be used cannot go back to the refrigerator. For a sensitive job or by customer requirement the solder paste in a jar must be used all in a day or dump to recycle.

9.4.3 Paste application - Refer to MFG020 for proper needle type. Solder paste is applied to the circuit board onto the SMT pads, across fine pitch and along other type pads.

9.4.4 Dry Paste Storage - Paste that has dried out because of excessive airtime on the stencil or is otherwise not usable must be properly discarded via recycling.

9.4.4.1 Dry paste shall be put into an empty paste jar with a lid. The jar is to be immediately deposited in empty dross can for proper disposal. Empty jars shall also be placed in the dross can for proper disposal.

9.5 Cleaning and Safety

9.5.1 Wipe and clean mis-print PCB use water for water-soluble solder paste and use isopropyl alcohol or specific solvent with ultrasound cleaning tank for water-insoluble solder paste.

9.5.2 Stencil wipes use disposable lint-free wipes soaked with solvent.

9.5.3 Clean all solder paste from floor, machine, or workstation.

9.5.4 Wash hands thoroughly with soap and water before eating or drinking.