



Powered by **SMART MATERIAL FLOW**

# **SMD BOX SP**

Intelligent solder paste handling solution

# SMD BOX SP



## WHAT IS SMD BOX SP?

### REFRIGERATION AREA

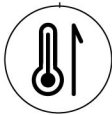
Solder paste is sensitive to the environment. Temperature is critical to its performance during use. SMD BOX SP has a refrigeration area to help use for properly storing them. 5-10 degrees C is required by most users.

### AMBIENT TEMPERATURE AREA

Solder paste must never be used cold. Solder paste must be allowed to reach ambient temperature before breaking the seal of the paste package. This typically takes four to six hours. Solder paste release from AT area is programmable.

### MIXER

SMD BOX SP internal mixer can ensure an even distribution of any separated material throughout the solder paste. Speed and timing are controlled by the user.



# SOLDER PASTE

Solder paste is a combination of metal solder particles and flux. The flux cleans the soldering surfaces of impurities and oxidation and provides a temporary adhesive that holds the surface mount components in place. The solder powder used in the paste can vary in its chemical composition with different material types and percentages used depending on the needs of the board being soldered.

Solder paste is available in both lead and lead-free versions to meet the Restriction of Hazardous Substances (RoHS) directive. Solder paste is also classified by the size of the metal particles that make up the solder powder. These particles must be spherical in shape and can vary in size according to the type standards specified in IPC J-STD 005.

## SOLDER PASTE CRITICAL TO SMT

Solder paste's complex combination requires certain properties to be successful. Without correct handling, the potential risk is chemistry starts to react before being used. The solder paste must be thixotropic when in the printing and component placement process. It must also retain a certain tackiness to keep the components in place during reflow soldering. Solder paste undergoes multiple handling and production processes. After transportation, solder paste is stored and printed before it is heated in the reflow process. The reflow contains four sub-processes: preheating, soak, reflow, and cooling. During different phases, the chemical composition changes due to evaporation and the melting of the alloy.



## HANDLING AUTOMATION



**Do not forget Traceability!**

## TRACEABILITY

Solder paste character plays important role in the printing process and finished PCBA quality. SMD BOX SP, an automated solder paste handling solution, automates every step of the solder paste handling process. IPC level4 traceability is achievable.

## CONNECTIVITY

SMD BOX SP is powered by Smart Material Flow software which provides seamless integration to your existing IT system, ERP/SCM/MES/WMS. Through our advanced Connectivity service users could get real-time solder paste usage information from the receipt stage.

# TECHNICAL SPECIFICATION

ITEM	SPECIFICATION
Compatible Material	Solder paste, Glue
Cartridge	Yes
Syringe	Yes
Refrigeration Area	Yes
Ambient Temperature Area	Yes
Barcode Recognition	Yes
Batch Loading	Yes
Batch Loading Max Capacity	30
Refrigeration Area Temperature Range	0~10℃, adjustable
Refrigeration Area Max Capacity	210
Temperature Monitor	Yes
Ambient Temperature Area Max Capacity	60
Mixing Area Capacity	2
Mixing Timer	Max 90min
Temperature Control	Yes
Weight Scaler	Resolution 0.1g
Software	SMF Standard
Communication	API provided for customized development
Dimension(mm)	1450*1510*2650
Power Supply	Single phase AC200V- AC240V
Power	3KVA



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