

# 4860P



## Sn63/Pb37 Solder Paste, No-Clean

Sn63/Pb37 solder paste, also known as Sn63 solder paste or 63 37 solder paste, is a no-clean solder paste that is made from a blend of high purity, non-recycled tin and lead alloy powder combined with a no-clean flux to form a paste. It is designed for surface mount applications and provides high tack force and good wettability. The post-soldering residues are transparent, non-conductive, non-corrosive, and highly insulated. ("No-clean" means that residues are not harmful to assemblies.)

It is designed for use in high-speed printing and is an ideal choice for SMT solder paste printers. It can yield brick-like prints even when using ultra-fine pitch stencils as small as 0.3 mm.

## Features & Benefits

Alloy exceeds J-STD-006C and meets ASTM B 32 purity requirements

Flux meets J-STD-004B

Non-corrosive

Non-conductive residue

Halide-free

Good wettability

Type 3 (25–45  $\mu\text{m}$ )



## Available Packaging

Part #	Packaging	Net Vol.	Net Wt.
4860P-35G	Syringe	4.21 mL	35 g

## Storage and Handling

Store between 2 and 10 °C in an upright position with tip down to prevent flux separation and air entrapment.

Unopened container:

Shelf Life @ 2–10 °C 3.5 y

Shelf Life @ 20–25 °C 1 y

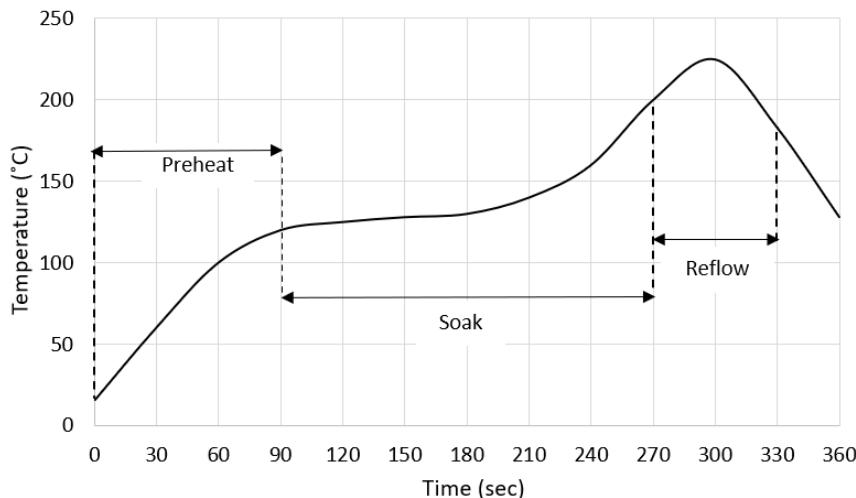
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## Properties

Flux Classification	REL0	J-STD-004B, MIL-F-14256F
Flux Type	Resin	J-STD-004B
Flux Activity	Low	J-STD-004B
Copper Mirror	No removal	IPC-TM-650 2.3.32
Corrosion Test	Pass	IPC-TM-650 2.6.15
Electromigration	Pass	Bellcore GR-78-CORE 13.1.4
Solder Ball Test	Pass	IPC-TM-650 2.4.43
Slump Test @ 25 °C, 0.63 vert./horiz. @ 150 °C, 0.63 vert./horiz. @ 25 °C, 0.33 vert./horiz. @ 150 °C, 0.33 vert./horiz.	No bridges No bridges 0.20/0.20 0.20/0.20	IPC-TM-650 2.4.35
Viscosity	850–1100 P	IPC-TM-650 2.4.34.3 modified
Acid Number (mg KOH/g)	110	IPC-TM-650 2.3.13
Halides (by weight)	<0.05 %	J-STD-004B
Post Reflow Flux Residue	45 %	TGA Analysis
Metal Loading	88 %	PC-TM-650 2.2.20
Surface Insulation Resistance (SIR)	$2.4 \times 10^{10} \Omega$	IPC-TM-650 2.6.3.3
Bellcore (Telecordia)	$4.1 \times 10^{10} \Omega$	Bellcore GR-78-CORE 13.1.3
Tack		JIS Z 3284
Initial	85 g	
Retention @ 24 h	90 g	
Retention @ 72 h	92 g	
Shelf Life	3.5 y	—

## Reflow Profile



## Reflow

Best results are achieved when the paste is reflowed in a forced air convection oven with a minimum of 8 zones. The following is a recommended profile for a forced air convection reflow process.

**Preheat Zone**—It is the ramp zone, which elevates the temperature of the PCB to the desired soak temperature. The rate of temperature rise should not exceed 2.5 °C/s to avoid thermal shock stress.

**Soak Zone**—It exposes the PCB to a stable temperature that allows the components to reach a uniform temperature. It allows the flux to concentrate and the volatiles to escape from the paste.

**Reflow Zone**—It is the spike zone, which elevates the temperature of the PCB assembly from the activation temperature to the recommended peak temperature.

## Application Instructions

Read the product SDS for more detailed instructions before using this product.

1. Take solder paste out of refrigerator and allow it to reach room temperature prior use.
2. Remove the cap from the syringe. Do not discard cap.
3. Insert plunger to the back of the syringe. For better control, insert needle to the tip.
4. Dispense paste onto the desired area and place component on top.
5. Apply heat using a heat gun.
6. Clean tip to prevent contamination and material buildup.
7. Replace the cap on the syringe.
8. (Optional) Clean residue with MG #8241-T or #8241-W Isopropyl Alcohol Wipes.

**Disclaimer:** This information is believed to be accurate. It is intended for professional end-users who have the skills required to evaluate and use the data properly. M.G. Chemicals Ltd. does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.