

Technical Data Sheet



Product Type: No Clean Solder Paste
Product Name: Microbond® SMT645
Product ID: F645 Innolot-89M3

Description

F645 Innolot-89M3 solder paste is a state-of-the-art lead free no clean solder paste that promotes wetting and minimises soldering defects. Extensive testing at customer locations has proven this paste to be capable of defect-free performance in the production environment. **Reflow under N₂ is recommended.**

Key Benefits

- Exceptional print to print consistency
- Outstanding wetting

Compliant Products

- Flux SF 64

Applications

- Printing

Product Code and Alloy

Product Code				Powder Properties			
Paste	Alloy	Metal Content	*Viscosity	Powder Type	Particle Size	Alloy	Melting Point
F645	Innolot	89%	M	3	25 – 45 µm	Sn/Ag3.8/Cu0.7/ Ni0.15/Sb1.5/Bi3	206 – 218 °C

*D = Dispense grade M = Print grade H = Print grade, high L = Dipping/Jetting grade, Low

Flux Activity

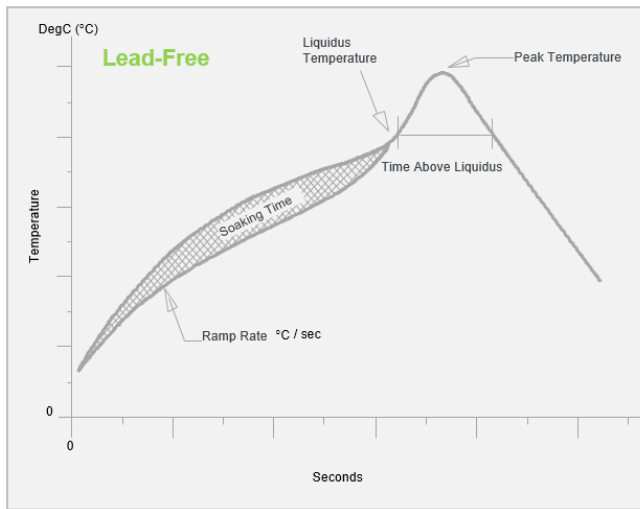
Activity Level (J-STD 004)	ISO 9454-1 {DIN EN 29454-1}	Classification
RELO	1.2.3.C	No Clean/ Solvent Clean

Halogen Content

Halogen-Zero (No halogen added in the flux)
Tolerances: Halogen < 50 ppm; measured according to BS EN 14582

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Recommended Reflow Profile



* Graph not drawn to scale

Recommended Profile

Average Ramp Rate	1 – 3 °C/s
Peak Temperature	15 °C (min) – 40 °C (max) above Melting Temperature
Time above liquidus	45 – 90 s
Reflow Atmosphere Type 3 – 5	Reflow under N₂

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Cleaning Instructions

After reflow flux residues may remain on the circuit and do not need to be washed. For cleaning of wet paste or if desired for cleaning of flux residues Zestron and Vigon cleaners can be used – see separate cleaning recommendations.

Storage

- Store the solder paste in tightly-sealed containers and avoid exposure to sunlight and high humidity
- Max expiration date: please refer to the expiry date on the label of the packaged product
- Storage condition in the refrigerator at 2 - 10 °C
- Store cartridges with tip pointing downwards

Paste Preparation

- Remove paste from fridge: Before opening the package, leave paste for at least 4 hours (depending on jar/ cartridge size) at room temperature, so that paste warms up
- Do not open jar/cartridge while paste is cold to prevent condensation
- Do not heat the paste beyond room temperature
- Before using of paste jar: To obtain uniform, stable viscosity stir paste for 1 to 2 min, using a stainless steel or chemically resistive plastic spatula
- For further information see Technical Information

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