

Microbond® PE645

No Clean Solder Paste



Description

PE645 SnSb10-88.5 M40 solder paste is a state-of-the-art, halogen-zero, lead free and no clean solder paste. With its outstanding wetting capability, the solder paste is suitable for a wide range of die metallizations. It minimizes soldering defects while offering an exceptional print to print consistency.

Key Features

- Exceptional print to print consistency
- Outstanding wetting
- Min. 8 hours tack and work life
- Low die tilt
- Easy to clean



**This picture is solely intended for illustration purposes. Syringes and jars are available in different types and colors and may change over time.*

Paste Properties

Product ID	PE645 SnSb10-88.5 M40
Flux	F645
Alloy	SnSb10
Compliant Products	Flux SF 64
Metal content (%)	88.5
Viscosity*	M
Application	Printing
Halogen content	Halogen zero (No halogen added in the flux)
Tolerances	Halogen < 50 ppm, measured according to BS EN 14582

Powder Properties

Powder type	Type 4
Particle size (µm)	20 – 38
Alloy	Sn90 / Sb10
Melting point (°C)	246 - 252 °C

Flux Activity

Activity level (J-STD-004)	RELO
ISO 9454-1 {DIN EN 29454-1}	1.2.3.1
Classification	No clean/ Solvent Clean

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

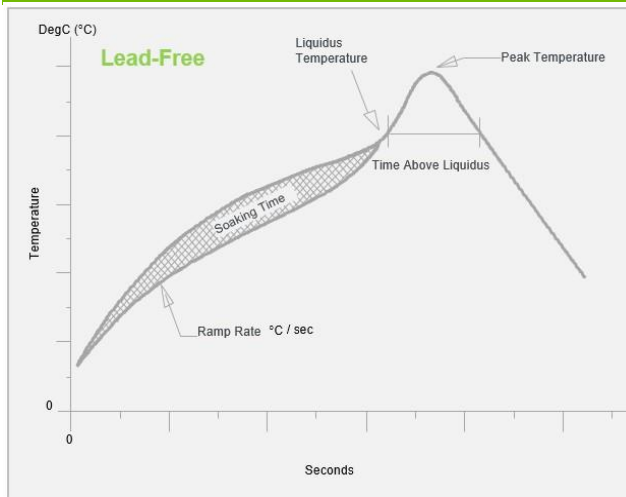
The descriptions and engineering data shown here have been compiled by Heraeus using commonly accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy or the results obtained from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for particular application. The Heraeus logo and Heraeus, Microbond® and Microbond figurative mark or registered trademarks of Heraeus Holding GmbH or its affiliates. All rights reserved.

Microbond® PE645

No Clean Solder Paste



Paste Properties



* Graph not drawn to scale

Average ramp rate (°C/s)	1 – 3
Peak temperature (°C)	15 (min) – 40 (max) above melting temperature
Time above liquidus (s)	60 – 120
Reflow atmosphere	Reflow in N ₂ and/or vacuum

Cleaning Instruction

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.

Paste Preparation

- Remove paste from refrigerator: 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 paste jar: To obtain uniform, stable viscosity stir paste for 1 – 2 min, using stainless steel or chemically resistive plastic spatula

Storage Conditions

Storage temperature	2 – 10 °C
Max expiration date	Refer to expiry date on the label of the packaged product

- Store the solder paste in tightly sealed containers and avoid exposure to sunlight and high humidity
- Store cartridges with tip pointing downwards

Americas

Phone +1 610 825 6050
electronics.americas@heraeus.com

Asia Pacific

Phone +65 6571 7649
electronics.apac@heraeus.com

China

Phone +86 53 5815 9601
electronics.china@heraeus.com

Europe, Middle East and Africa

Phone +49 6181 35 4370
electronics.emea@heraeus.com

The descriptions and engineering data shown here have been compiled by Heraeus using commonly accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy or the results obtained from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for particular application. The Heraeus logo and Heraeus, Microbond® and Microbond figurative mark or registered trademarks of Heraeus Holding GmbH or its affiliates. All rights reserved.