

## Microbond® PE645

### No Clean Solder Paste



#### Description

PE645 SnSb10-88.5 M40 solder paste is a state-of-the-art halogen-zero lead free no clean solder paste that promotes wetting and minimizes soldering defects. Extensive testing at customer locations has proven this paste to be capable of defect-free performance in the production environment.

#### Key Features

- Exceptional print to print consistency
- Outstanding wetting



*This picture does not show the packaging of PE645 and is solely intended for illustration purposes. The products are available in different packaging configurations and may change over time. Please refer to the latest safety data sheets for safety-relevant pictograms.*

**Note: Preliminary data is subjected to changes. For more information please contact your local Heraeus office.**

#### 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

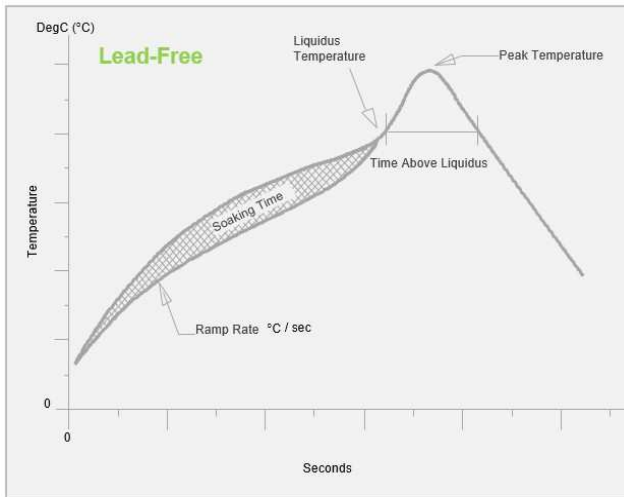
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#### Paste Properties



\* 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 <sub>2</sub> and/or vacuum

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#### 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
- For further information see Technical Information

#### Storage Conditions

Storage temperature	2 – 10 °C
Max expiration date	Refer expiry date on the label of the packaged product
<ul style="list-style-type: none"> <li>Store the solder paste in tightly sealed containers and avoid exposure to sunlight and high humidity</li> <li>Store cartridges with tip pointing downwards</li> </ul>	

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