

Technical Data Sheet



Product Type: Water Soluble Solder Paste
Product Name: Welco® AP5112
Product ID: SnAg3Cu0.5-P6-WS5112-9

Description

SnAg3Cu0.5-P6-WS5112-9 is a water soluble printing paste, with low halogen contents; Cl or Br < 500 ppm, total < 900 ppm. Splashing performance is exceptional; minimizing the occurrence of solder defects and improves yield. It is suitable for component attach system in package applications.

Key Benefits

- Good printability on fine pitch pad size
- Minimal solder splashing
- Good wetting performance
- Good cleaning properties
- Halogen free

Applications

- Printing

Product Code and Alloy

Product Code					Powder Properties		
Paste	Alloy	Metal Content	Viscosity	Powder Type	Particle Size	Alloy	Melting Point
WS5112	Sn/Ag3/Cu0.5	89%	M	6	5 – 15 µm	Sn96.5/Ag3/Cu0.5	217 - 219°C

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

Flux Activity

Activity Level (J-STD 004)	Classification
ORH1	Water Soluble

Halogen Content

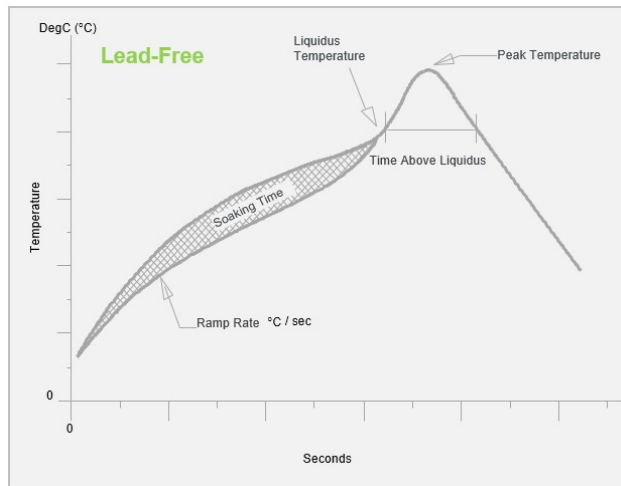
Halogen Free
Tolerances: Cl or Br < 900 ppm, total < 1500 ppm; measured according to BS EN 14582

Basic Test Properties [IPC TM-650]

Solder Balling	Wetting Test	Tackiness (gF)	Slump Test (mm)
Pass, Classified Class 1	Pass, Classified Class 1	> 90	0.06 – 0.15

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Recommended Reflow Profile



* Graph not drawn to scale

Recommended Profile

Average Ramp Rate	1 – 3 °C/s
Peak Temperature	30 °C (min) – 50 °C (max) above Melting Temperature
Time above liquidus	40 – 90 s
Reflow Atmosphere	Reflow in N₂ with
Type 3 – 5	< 200 ppm O₂
Type 6 – 7	< 100 ppm O₂

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Cleaning Instructions

After reflow flux residues remain on the circuit and need to be washed. Hot deionized water at a minimum temperature of 30 °C – 40 °C as soon after reflow as possible.

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

Heraeus Electronics
Heraeus Deutschland GmbH & Co. KG
Heraeusstraße 12 – 14
63450 Hanau, Germany
www.heraeus-electronics.com

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

China
Phone +86 21 3357 5457
electronics.china@heraeus.com

Asia Pacific
Phone +65 6571 7677
electronics.apac@heraeus.com

Europe, Middle East and Africa
Phone +49 6181 35 3069, +49 6181 35 3627
electronics.emea@heraeus.com