

Water Soluble Solderpaste DS-0304LF 305



Basic Materials

Alloy	Sn/3.0Ag/0.5Cu	87~89 wt%
Flux	VOC-free, Halide-zero, Non-Toxic, Water soluble	11~13 wt%
Solder Powder Size	Design according to customer	#4, #5, #6 and #7

DESCRIPTION

Paste-Cat DS-0304LF 305 is a halide zero neutral pH water soluble solder cream specifically designed for surface mount processes and other electronics assembly applications where post reflow water cleaning is used. It is a third-generation product that extends the tackiness and stencil life properties of water-soluble solder cream even beyond those previously achieved with traditional rosin-based formulations.

Unique activator system and water-soluble resin carrier of Paste-Cat DS-0304LF 305 are suitable to laser soldering which can fulfill quality of mini LED and Micro LED. It meets the requirements for IPC-SP-819 designation as H3C.

PHYSICAL & CHEMICAL PROPERTIES

- Water Extract : >100,000 ohm-cm: High
- Resistivity: RMA, Low RA Class
- Corrosiveness : Passes Copper Mirror
- Halide Content : Halide-zero
- Wetting Balance : Faster than traditional RMA's
- SIR(ohms) 7days : >10E9 @ 85°C/85% RH, cleaned
- pH, Flux Residues : =6.8 Typical
- Carrier Resin : Completely water Soluble

STORAGE AND USE

DS-0304LF 305 is generally 500g packed individually and 10kg in inner box.

When ship to oversea, 20Kg Master box is thermally controlled cool with several Ice packs.

If especially order, we could a separate wrap and should be stored refrigerated upon receipt at 4-10°C. Paste-Cat shall be aged to reach room temperature over 2~4 hours before using.

Prolonged storage at room temperature may deteriorate the quality of Solder paste

While the flux system is not considered toxic, its use in typical reflow will generate a small amount of reaction and decomposition vapors. These vapors should be adequately exhausted from the work area. Consult the MSDS for additional safety information.

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PHYSICAL AND CHEMICAL PROPERTIES

Test Items		Data	Remark
Alloy Application		Sn/3.0Ag/0.5Cu	Lead Free
Solder Particle		2~12 μm, 5~15 μm, 15~25 μm, 20~38 μm	IPC J-STD-006
Melting Point (°C)		217~220	
Halogen Content (%)		Free	IPC J-STD-004
S.I.R (Ω)	Before	5.5×10^{12}	40°C/95%RH/96hrs, Cleaned
	After	4.3×10^{11}	
Flux Content (%)		12 ± 1.0	Water Base
Residue (%)		3.5~3.7	After Soldering
Viscosity (Pa.s)		240 ± 40	at 25 °C
Spread Test (%)		Over Lead Free 80%	
Application Pitch(mm)		0.1~0.6mm	
Copper Corrosion		Good	
Solder Ball Test		Good	IPC J-STD-005 Pass
Dry Time (Stencil Life.)		>8 Hours	23°C, 50% RH
Thawing Time		2 ~ 4 Hours	Best Condition : 25 °C
Shelf Life		6 Months	@ 1 ~ 10°C

Guideline for soldering

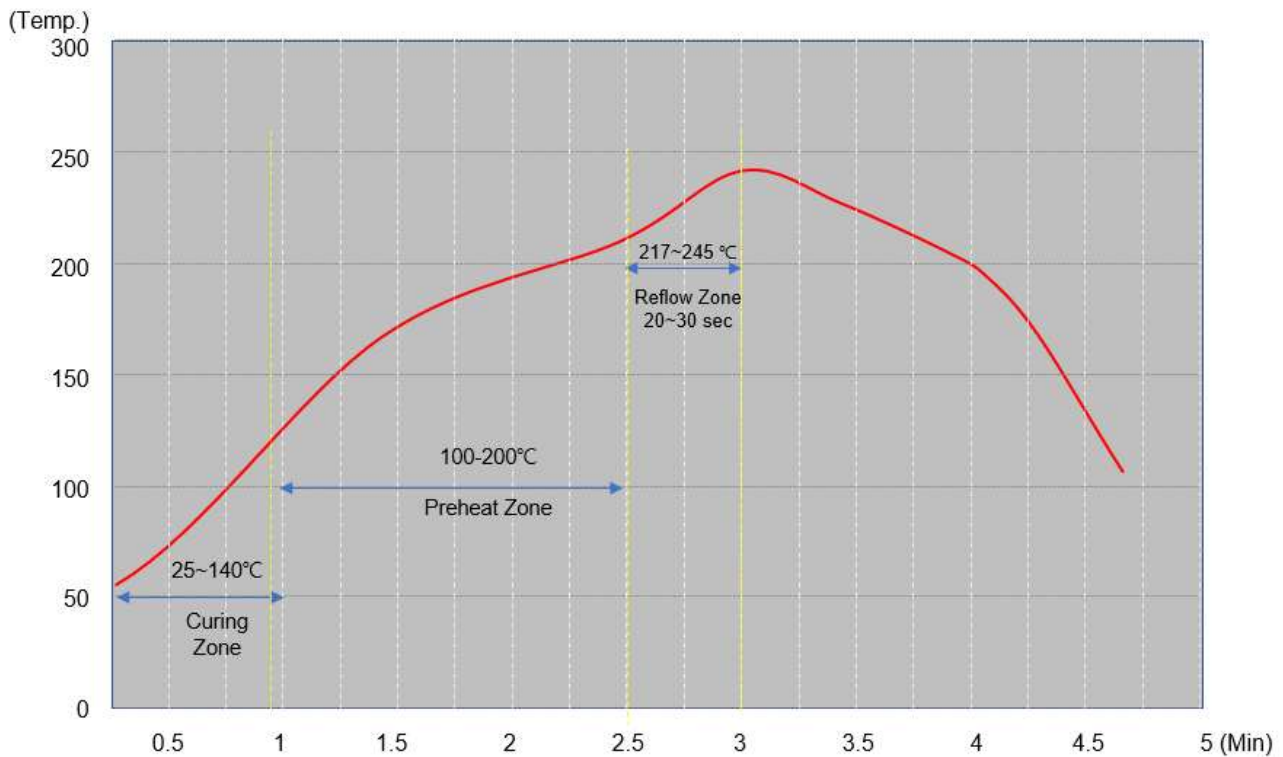
- Stencil : Laser Cut Application
- Squeegee : Recommend Metal
- Conveyer Speed : 25mm ~ 200mm/sec
- Temp. Profile : Ramp @ 60 ~ 120 / min to 145 ~ 190°C
Dwell @ 145 ~ 190 for 0.5 ~ 2.0 minutes
Ramp @ 1 ~ 2°C/Sec to 220 ~ 245°C Peak Temp
Ramp Down @ 1.5 ~ 2.0 / Sec

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Reflow Condition

Recommend Reflow Profile



- Stencil : Laser Cut Application
- Squeegee : Recommend Metal
- Speed : 25mm ~ 200mm/sec
- Ramp rate : 2.1~3°C/sec → Cure : 25~140°C for 40-50sec
- Ramp rate : 1.5~1.6°C/sec → Preheat : 140~200°C for 40-70sec
- Ramp rate : 1.2~1.3°C/sec → Reflow : 217~245°C for 20-30sec