

# INDIUM8.9HFA

SOLDER PASTE

Best printing performance  
in the industry.



## Indium8.9HFA Delivers:

- Superior printing at high speeds → Decreased cycle times
- Ultra-low print pressures → Extended stencil life and reduced need for underside wipe
- Unsurpassed transfer efficiency for small apertures → Extends process window
- Excellent resistance to bridging for fine-pitch components → Best fine pitch performance
- Quick recovery after pauses → Forgiving to increasing mix on lines and change-overs
- Halogen-free performance that rivals traditional solder paste → Environmental conformance
- Unique oxidation barrier to ensure robust reflow performance → Eliminates common defects

### Ideal for miniaturized components and fine-pitch assembly

- Designed especially for CSP, 0201, and 01005 components

### First-class printing performance

- Excellent print transfer through tiny apertures with area ratios <0.66
- Long stencil life and forgiving response-to-pause
- High component retention tack prevents components from shifting

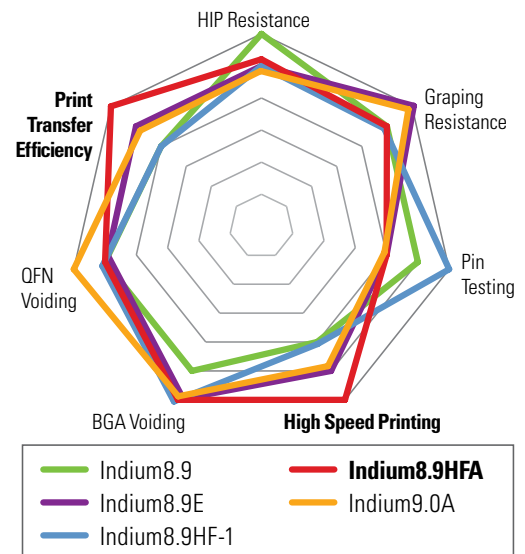
### Robust reflow performance

- Wide process window for flexible reflow profiling
- Optimal wetting to all common surface finishes

### Resists voiding

- Low voiding (<5%) for BGAs with via-in-pad technology

## Indium8.9 Series Solder Pastes



## Pb-Free Alloys for use with Indium8.9HFA

Common Name	Composition	Solidus (°C)	Liquidus (°C)	Comments
SAC405	95.5Sn/4.0Ag/0.5Cu	217	218	High thermal reliability for applications in harsh environments
SAC387	96.5Sn/3.8Ag/0.7Cu	217	219	Original iNEMI recommended SAC alloy
SAC305	96.6Sn/3.0Ag/0.5Cu	217	220	Solder products value council recommended SAC alloy
SAC105	98.5Sn/1.0Ag/0.5Cu	217	225	Low-cost alloy with reasonable drop test performance
SAC0307	99.0Sn/0.3Ag/0.7Cu	217	227	Low-Ag SAC alloy
Sn992	99.2Sn/0.5Cu+Bi+Co		227	No-Ag alloy with enhanced properties suitable for SMT applications

## From One Engineer To Another®

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Form No. 98880 R0



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# Halogen-Free Materials



Just being halogen-free isn't good enough!

## Indium8.9HFA Solder Paste

- Utilizes unique oxidation barrier to:
  - Eliminate graping
  - Eliminate head-in-pillow defects
  - Produce wide reflow process window
- Possesses Indium Corporation's typically outstanding print transfer efficiency
- Halogen content of flux residue
  - Br < 50ppm
  - Cl < 50ppm

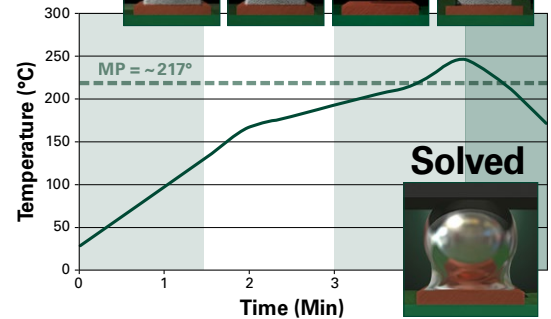
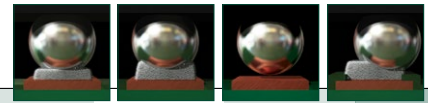


Typical paste



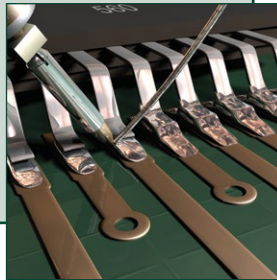
Indium8.9HFA

Problem:



## CW-807 Flux-Cored Wire

- Superior wetting speeds
- User friendly: low odor and smoke
- Halogen content of residue:
  - CW-807
    - Br < 50ppm
    - Cl < 900ppm



## WF-7745 and WF-9945 Wave Solder Fluxes

- WF-7745**
  - Superior hole-fill
  - No green copper discoloration as typical with VOC-free fluxes
  - Halogen content of residue:
    - Br < 50ppm
    - Cl < 50ppm
- WF-9945**
  - Superior hole-fill
  - Sn/Pb and Pb-free compatible
  - Halogen content of residue:
    - Br < 50ppm
    - Cl < 50ppm



## TACFlux® 020B and 089HF

- Performs well in traditional touch-up repair as well as BGA/CSP rework
- Halogen content of residue:
  - Br < 50ppm
  - Cl < 50ppm
- Low risk: passes SIR unreflowed (020B)



## NC-771 Flux Pen

- Low risk: passes SIR unreflowed
- Halogen content of residue:
  - Br < 50ppm
  - Cl < 50ppm



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