

Solder Paste Water-Washable Sn42/Bi57.6/Ag0.4

Product Highlights

Printing speeds up to 100mm/sec
Long stencil life, Wide process window
Clear residue

Low voiding
Excellent wetting compatibility on most board finishes
RoHS 3 and REACH compliant

L0 Flux Classification in a water washable formula

Specifications

Alloy: Sn42/Bi57.6/Ag0.4
Flux Type: Water-Washable
Flux Classification: REL0
Melting Point: 137°C (279°F)
Shelf Life: Refrigerated >12 months, Room Temperature >1 month

| Orderable Part Numbers | Mesh Size (Micron Range) | Metal Load | Application | Packaging |
|------------------------|--------------------------|------------|-------------|----------------|
| HMT43L0LT-T3-35S | T3 (25-45 µm) | 87% | Dispense | 35g syringe |
| HMT43L0LT-T3-100S | | | | 100g syringe |
| HMT43L0LT-T3-500J | | 89.75% | Print | 500g jar |
| HMT43L0LT-T3-600C | | | | 600g cartridge |
| HMT43L0LT-T4-35S | T4 (20-38 µm) | 87% | Dispense | 35g syringe |
| HMT43L0LT-T4-100S | | | | 100g syringe |
| HMT43L0LT-T4-500J | | 89.75% | Print | 500g jar |
| HMT43L0LT-T4-600C | | | | 600g cartridge |
| HMT43L0LT-T5-35S | T5 (15-25 µm) | 87% | Dispense | 35g syringe |
| HMT43L0LT-T5-100S | | | | 100g syringe |
| HMT43L0LT-T5-500J | | 89.5% | Print | 500g jar |
| HMT43L0LT-T5-600J | | | | 600g cartridge |

Printer Operation

Print Speed: 25-100mm/sec
Squeegee Pressure: 70-250g/cm of blade
Under Stencil Wipe: Once every 10-25 prints, or as necessary

Stencil Life

>8 hours @ 20-50% RH 22-28°C (72-82°F)
>6 hours @ 50-70% RH 22-28°C (72-82°F)

Cleaning

HMT43L0LT can be cleaned using deionized water at 40-60°C with a recommended water pressure of 30-50 PSI. Under normal conditions, there is no need for detergents or saponifiers. For high density or low standoff assemblies, a detergent cleaner is recommended to reduce surface tension of the washing system.

Storage and Handling

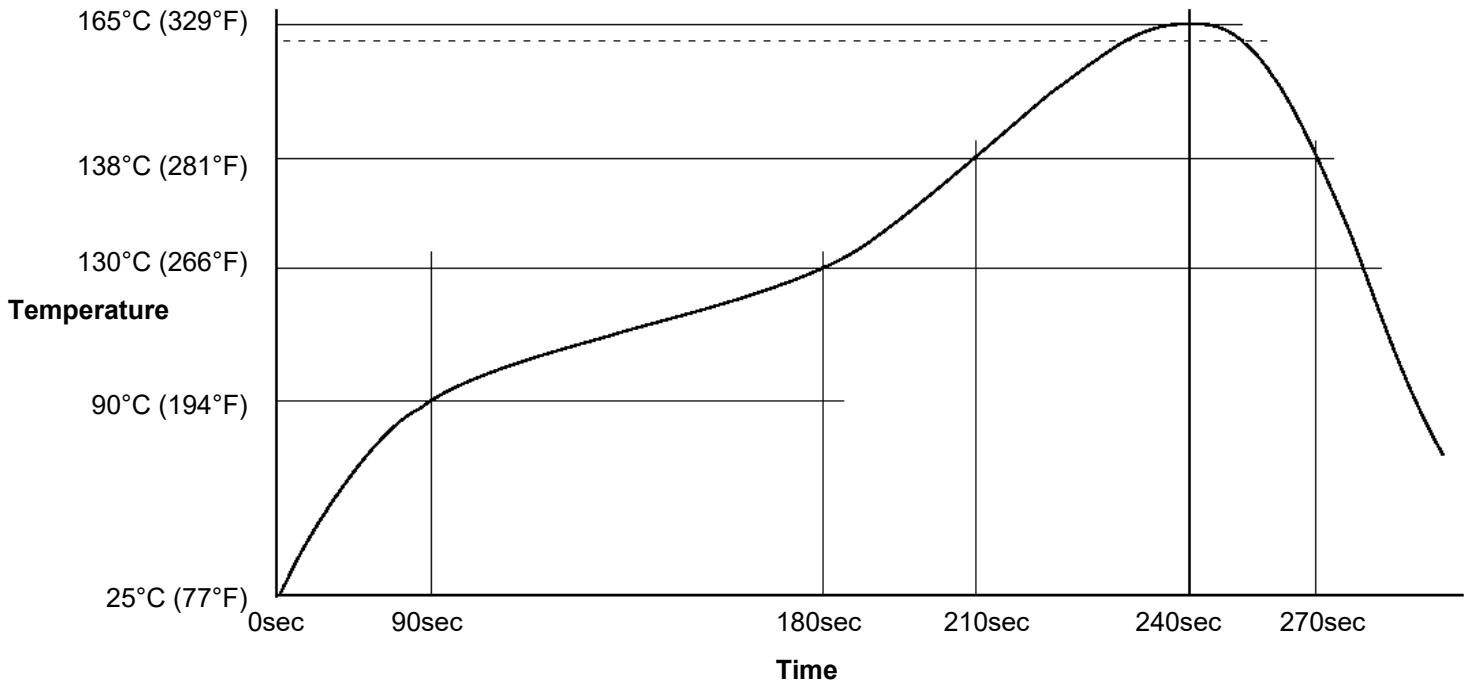
Refrigerate at 3-8°C (37-46°F). Do not freeze. Allow 4 hours for solder paste to reach an operating temperature of 20-25°C (68-77°F) before use.

Transportation

This product has no shipping restrictions. Shipping below 0°C (32°F) or above 25°C (77°F) for normal transit times by ground or air will not impact this product's stated shelf life.

Recommended Profile

Reflow profile for Sn42/Bi57.6/Ag0.4 or Sn42/Bi58 solder assembly, designed as a starting point for process optimization.



Test Results

| Test J-STD-004 or other requirements as stated | Test Requirement | Result |
|-----------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------------------------------------------|
| Copper Mirror | IPC-TM-650: 2.3.32 | L: No breakthrough |
| Corrosion | IPC-TM-650: 2.6.15 | L: No corrosion (uncleaned) |
| Quantitative Halides | IPC-TM-650: 2.3.28.1 | L: <0.05 |
| Electrochemical Migration | IPC-TM-650: 2.6.14.1 | L: <1 decade drop (cleaned) |
| Surface Insulation Resistance 40°C, 90% RH @ 168 Hours | IPC-TM-650: 2.6.3.7 | L: ≥100MΩ (cleaned) |
| Tack Value | IPC-TM-650: 2.4.44 | 38-42g |
| Viscosity – Malcom @ 10 RPM/25°C (x10 ³ mPa·s) | IPC-TM-650: 2.4.34.4 | Print: 180-230, Dispense:90-120 |
| Visual | IPC-TM-650: 3.4.2.5 | Clear and free from precipitation |
| Conflict Minerals Compliance | Electronic Industry Citizenship Coalition (EICC) | Compliant |
| REACH Compliance | Articles 33 and 67 of Regulation (EC) No 1907/2006 | Contains no substance >0.1% w/w that is listed as a SVHC or restricted for use in solder materials |

Conforms to the following Industry Standards:

| | |
|-----------------------------------------------------------------------------|-----|
| J-STD-004B, Amendment 1 (Solder Fluxes): | Yes |
| J-STD-005A (Solder Pastes): | Yes |
| J-STD-006C, Amendments 1 & 2 (Solder Alloys and Fluxed/Non-Fluxed Solders): | Yes |
| RoHS 3 Directive (EU) 2015/863: | Yes |