HMT Solder™ HMT29SAC

Datasheet Revision: 4, Revision Date: November 18, 2021 www.HMTsolder.com

Solder Paste No-Clean Sn96.5/Ag3.0/Cu0.5

Product Highlights

Printing speeds up to 100mm/sec
Higher viscosity for better print definition
Clear residue
Passes BONO Test
Low voiding
Excellent wetting compatibility on most board finishes
RoHS 3 and REACH compliant

Specifications

Alloy:	Sn96.5/Ag3.0/Cu0.5
Flux Type:	No-Clean
Flux Classification:	ROL0
Melting Point:	217-220°C (423-428°F)
Shelf Life:	Refrigerated >12 months, Room Temperature >1 month

Orderable Part Numbers	Mesh Size (Micron Range)	Metal Load	Application	Packaging
HMT29SAC-T3-35S	T3 (25-45 µm)	86%	Dispense	35g syringe
HMT29SAC-T3-100S				100g syringe
HMT29SAC-T3-500J		88.5%	Print	500g jar
HMT29SAC-T3-600C				600g cartridge
HMT29SAC-T4-35S	T4 (20-38 µm)	86%	Dispense	35g syringe
HMT29SAC-T4-100S				100g syringe
HMT29SAC-T4-500J		88.5%	Print	500g jar
HMT29SAC-T4-600C				600g cartridge
HMT29SAC-T5-35S	T5 (15-25 µm)	86%	Dispense	35g syringe
HMT29SAC-T5-100S				100g syringe
HMT29SAC-T5-500J		88.5%	Print	500g jar
HMT29SAC-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

>12 hours @ 20-50% RH 22-28°C (72-82°F)
>6 hours @ 50-70% RH 22-28°C (72-82°F)

Cleaning

HMT29SAC is a no-clean solder paste that can be left on the board for most SMT assemblies. For applications requiring cleaning, HMT29SAC can be removed with HMT175CS Co-Solvent series flux cleaner, or most commercially available aqueous cleaners.

Storage and Handling

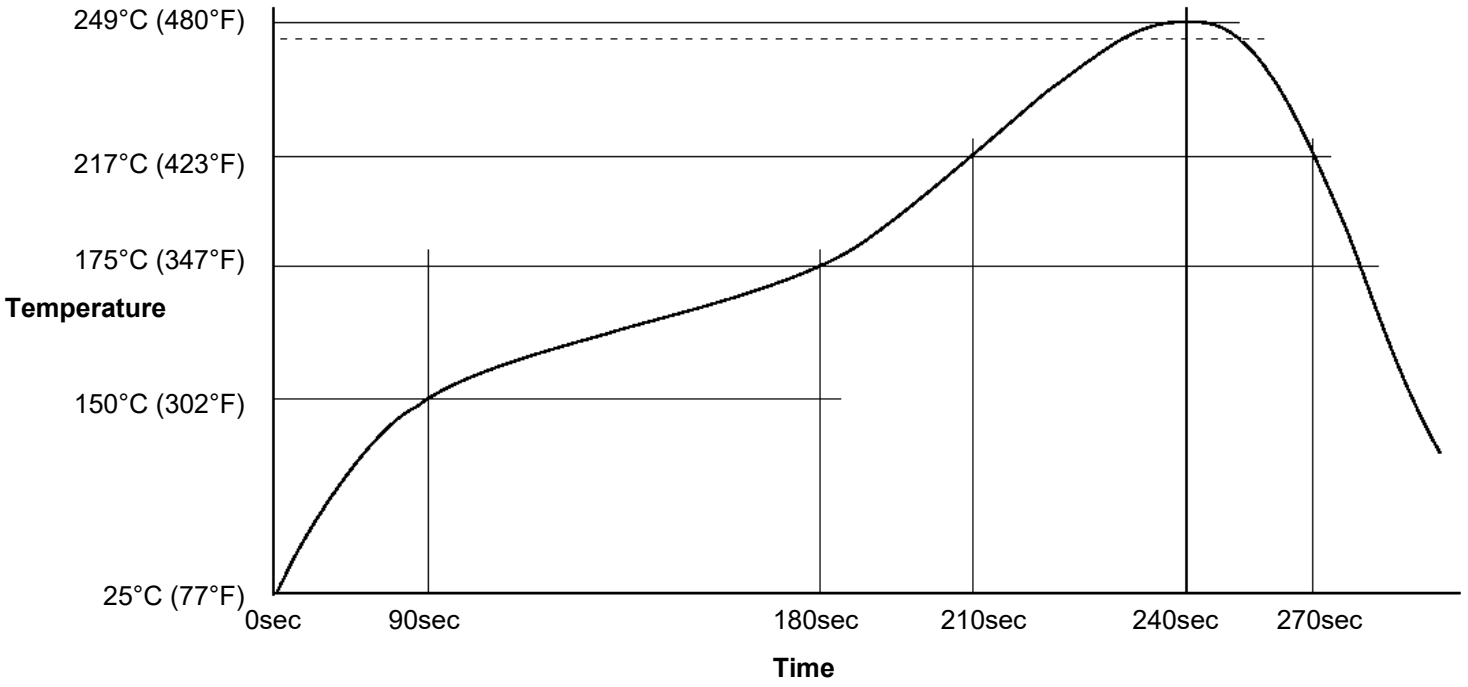
Refrigerate at 3-8°C (37-46°F). Do not freeze. Allow 4 hours for solder paste to reach an operating temperature of 20-25°C (68-77°F) before use.

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 Sn96.5/Ag3.0/Cu0.5 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 (uncleaned)
Surface Insulation Resistance 40°C, 90% RH @ 168 Hours	IPC-TM-650: 2.6.3.7	L: ≥100MΩ (uncleaned)
Tack Value	IPC-TM-650: 2.4.44	50-55g
Viscosity – Malcom @ 10 RPM/25°C ($x10^3$mPa·s)	IPC-TM-650: 2.4.34.4	Print: 160-220, 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