Datasheet revision 1.2 www.chipquik.com

Thermally Stable Solder Paste WS (Water-Soluble) Sn42/Bi57.6/Ag0.4 T4 (500g Jar)

Product Highlights

Revolutionary Formula: No Refrigeration Required!

Printing speeds up to 100mm/sec

Long stencil life Wide process window

Excellent Wetting with Moderate Activity (REM0) Flux

Water-Soluble Easily cleaned with water (60°C+)

Low voiding
Compatible with most board finishes
Print grade
Compatible with enclosed print heads
RoHS 3 and REACH compliant

Specifications

Alloy: Sn42/Bi57.6/Ag0.4

Mesh Size: T4
Micron (µm) Range: 20-38

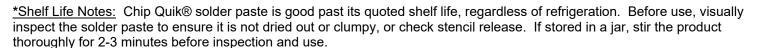
Flux Type: Synthetic Water-Soluble

Flux Classification: REM0 (Residue must be water-washed at 60°C+ after reflow)

Metal Load: 90% Metal by Weight

Melting Point: 138°C (281°F)
Packaging: 500g Jar

Shelf Life: Refrigerated >6 months, Unrefrigerated >6 months *See notes below:



Chip Quik® solder paste is manufactured using high quality synthetic flux and precision atomized metal powder. Chip Quik® solder paste is guaranteed for 12 months from date of manufacture, regardless of refrigeration. If you have any issues with our solder paste, please contact Chip Quik® directly for no charge warranty replacement. Please retain original bill of sale, and solder paste in original container as we may request its return for internal R&D testing purposes.

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) >4 hours @ 50-70% RH 22-28°C (72-82°F)

Stencil Cleaning

Automated stencil cleaning systems for both stencil and misprinted boards. Manual cleaning using isopropyl alcohol (IPA).

Storage and Handling

Store at 3-25°C (37-77°F). Do not freeze. Refrigeration is not required, but will extend shelf life. Allow 4 hours for solder paste to reach an operating temperature of 20-25°C (68-77°F) before use.

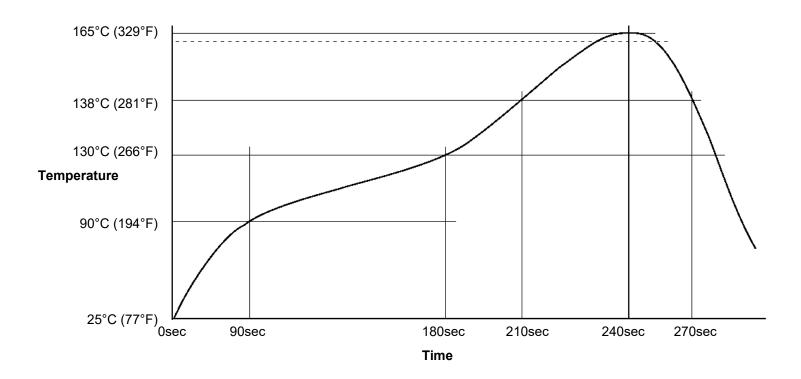
Transportation

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 solder assembly, designed as a starting point for process optimization.



Test Results

rest results		
Test J-STD-004 or other	Test Requirement	Result
requirements as stated		
Copper Mirror	IPC-TM-650: 2.3.32	L: No breakthrough
Corrosion	IPC-TM-650: 2.6.15	L: No corrosion
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
Surface Insulation Resistance 85°C,	IPC-TM-650: 2.6.3.7	L: ≥100MΩ
85% RH @ 168 Hours		
Tack Value	IPC-TM-650: 2.4.44	37g
Viscosity – Malcom @ 10 RPM/25°C	IPC-TM-650: 2.4.34.4	Print: 155-215, Dispense: 80-115
(x10 ³ mPa/s)		
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