

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# **CHIPQUIK®**

# TS391SNL500C

Datasheet revision 1.0 www.chipquik.com

# Thermally Stable Solder Paste No-Clean Sn96.5/Ag3.0/Cu0.5 T4 (500g Cartridge)

#### **Product Highlights**

Revolutionary Formula: No Refrigeration Required!

Printing speeds up to 125mm/sec

Long stencil life

Wide process window

Clear residue

Low voiding

Excellent wetting compatibility on most board finishes

Dispense grade

Compatible with enclosed print heads

RoHS II and REACH compliant

#### **Specifications**

Alloy: Sn96.5/Ag3.0/Cu0.5

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

Flux Type: Synthetic No-Clean

Flux Classification: ROL0

Metal Load: 87% Metal by Weight
Melting Point: 217-220°C (423-428°F)
Packaging: 60z/500g Cartridge

Shelf Life: Refrigerated >12 months, Unrefrigerated >12 months \*See notes below:

\*Shelf Life Notes: Chip Quik® solder paste is good past its quoted shelf life, regardless of refrigeration. Before use, visually inspect the solder paste to ensure it is not dried out or clumpy, or check stencil release. If stored in a jar, stir the product thoroughly for 2-3 minutes before inspection and use.

Chip Quik® solder paste is manufactured using Made in USA 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: 25-125mm/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

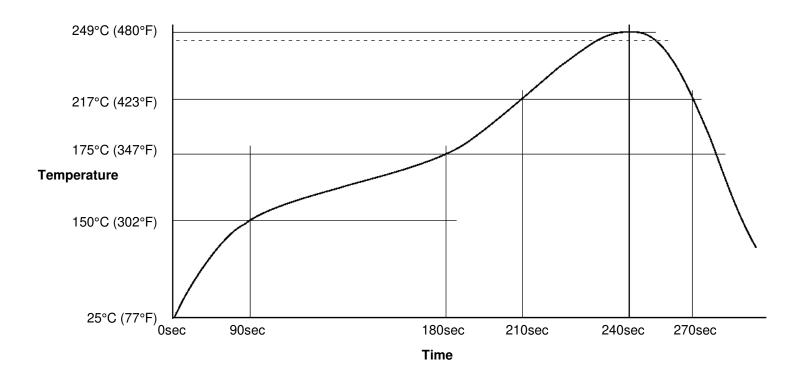
Store at room temperature 20-25°C (68-77°F). Do not freeze. Chip Quik Thermally Stable solder paste should be stored at its operating temperature (room temperature) of 20-25°C (68-77°F), therefore no warming time is required before use.

## **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
Quantitative Halides	IPC-TM-650: 2.3.28.1	L: <0.5%
Electrochemical Migration	IPC-TM-650: 2.6.14.1	L: <1 decade drop (No-clean)
Surface Insulation Resistance 85°C, 85% RH @ 168 Hours	IPC-TM-650: 2.6.3.7	L: ≥100MΩ (No-clean)
Tack Value	IPC-TM-650: 2.4.44	33g
Viscosity – Malcom @ 10 RPM/25°C (x10 <sup>3</sup> mPa/s)	IPC-TM-650: 2.4.34.4	Print: 140-195, Dispense: 115-160
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 2 Directive 2011/65/EU:	Yes