



**QUALITEK®
DELTA® 691A-HS Solder Paste**

DESCRIPTION

691A-HS is a fully activated resin solder paste designed specifically for heat sink applications. It exhibits superior wetting and fluxing activities suitable for soldering on tough oxidized copper. Post reflow residue is minimal and it has clear transparent colour.

APPLICATION

MESH SIZE / PARTICLE SIZE

-200+325 mesh : 45 – 75 µm
-325+500 mesh : 25 – 45 µm
-400+635 mesh : 20 – 38 µm

DISPENSING/PARTICLE SIZE

Needle Gauge	Needle Inner Diameter		Applicable Powder
	In.	µm	Mesh Cut
18	0.033	838	-200+325
20	0.023	584	-325+500
21	0.020	508	-325+500
22	0.016	406	-325+500
23	0.013	330	-325+500
25	0.010	254	-400+635
27	0.008	203	-500

ALLOY

Alloy Type	Melting Point, °C
Sn42/Bi58	138
Sn63/Pb37	183
Sn96.5/Ag3.5	221
Sn96.5/Ag3/Cu0.5	217 – 221

METAL CONTENT

Typically 85% - 90 %

REFLOW PROFILE

Reflow Profile is determined by the melting temperature of the solder and the heat resistance of components. 691A-HS can be processed in most reflow media (i.e. IR, Vapor phase, Forced convection, etc.). Ramp rate of 2.5-3.0°C per second is desirable, since most components are rated for 4.0°C per sec.

PHYSICAL / CHEMICAL CHARACTERISTICS

Color & Appearance	Metallic Grey
Copper Mirror	Pass
Solder Ball Test	Pass
Post Reflow Flux Residue	<60 %
Halide Content	<0.20%

VISCOSITY

Malcom ¹	120 - 180 kcps
Brookfield ²	300 – 600 kcps

TACKINESS³

Tack Time	100gF @ 24 hours
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SHIPPING & STORAGE

Recommended storage temperature	2 – 10 °C
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SHELF-LIFE

Unopened container	6 Months from DOM
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1. Malcom PCU-203-Series, 10 RPM, 25°C
2. Brookfield RVTD, TF spindle, 5 RPM, 25°C
3. Press, JIS Method

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No. 6, Tuas South Street 5, Singapore 637790. TEL: (65) 6795-7757 FAX: 6795-7767

E-MAIL: sales@qualitek.com HOME PAGE: <http://www.qualitek.com>

HQ: 315 Fairbank St., Addison, IL 60101 U.S.A., Worldwide Branches: Philippines – China – United Kingdom – Mexico

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