



**LEAD-FREE GREEN  
DELTA<sup>®</sup> SOLDER PASTE  
NO CLEAN, WATER SOLUBLE & R.M.A.**

**CORPORATE HEADQUARTERS** USA: 315 Fairbank St. Addison, IL 60101 † 630-628-8083 † FAX 630-628-6543

**EUROPE** UK: Unit 9 Apex Ct. Bassendale Rd. Bromborough, Wirral CH62 3RE † 44 151 334 0888 † FAX 44 151 346 1408

**ASIA-PACIFIC HEADQUARTERS** SINGAPORE: 6 Tuas South St. 5 Singapore 637790 † 65 6795 7757 † FAX 65 6795 7767

**PHILIPPINES:** Phase 1 Qualitek Ave. Mariveles, Bataan Philippines C-2106 † 6347 935 4119 † FAX 6347 935 5608

**CHINA:** 3B/F, YiPa Print Bldg. 351 # JiHua Rd., Buji Shenzhen, China 518112 † 86 755 28522814 † FAX 86 755 28522787

## **Description**

Qualitek® offers GREEN Lead-Free Delta Solder Paste types that are unique formulations for easy identification when using both leaded and lead-free assembly applications. GREEN LF Delta Solder Paste is designed to eliminate the costly liability of cross contamination between Sn/Pb and Lead-Free paste in a mixed production environment. The solder pastes' GREEN appearance allows operators to readily distinguish it from Sn/Pb paste, whether on a stencil, a spatula, stencil wipes, or on a printed circuit board. The green color remains until reflowed, leaving normal metallic joint appearance. Post reflow residues are clear and UV detectable, using black fluorescent light, to further distinguish Lead-Free from Sn/Pb solder on assembled circuit boards. GREEN Lead-Free paste is a mistake proofing product offered only by Qualitek.

## **Availability**

Lead-Free GREEN DSP is available with following No Clean, R.M.A. and Water Soluble solder paste formulations. Paste Types available in GREEN:

- **No-Clean DSP 862**
- **No-Clean DSP 863**
- **No-Clean DSP 865A**
- **No-Clean DSP 618D (dispensing)**
- **R.M.A. DSP 230**
- **Water Soluble DSP 787LV**
- **Water Soluble DSP 798LF**
- **Water Soluble DSP 718D (dispensing)**

Available alloys include typical Sn/Ag/Cu and Sn/Ag, in Type 3, Type 4 and Type 5 mesh types.

## **Technical Information**

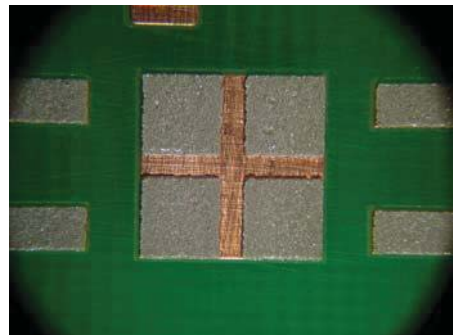
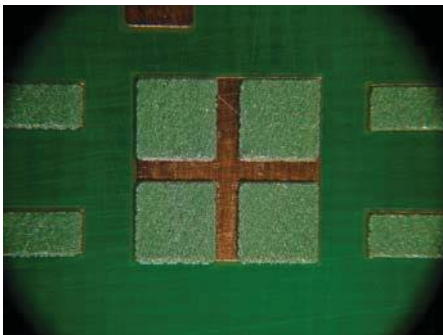
For reference, comparison data and images of the GREEN LF vs. standard color (grey) LF paste are given below.

For specific technical information on Physical Properties of the powder, alloys and paste chemistries, such as SIR, Printing, Reflow, Shelf Life and other application notes, please refer to the TDS for each solder paste type.

### **GREEN**

### **STANDARD**

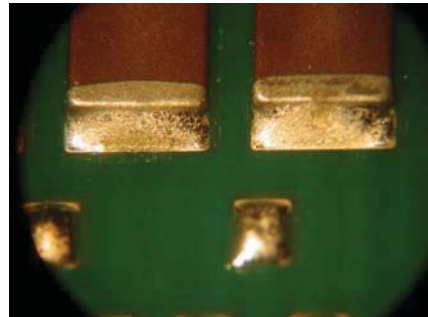
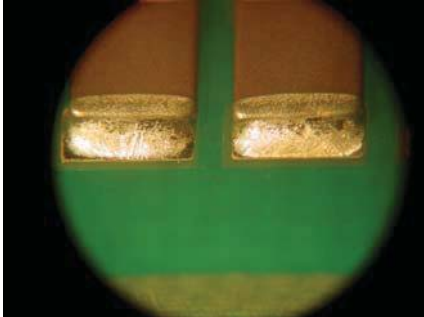
#### **Printing:**



**GREEN**

**STANDARD**

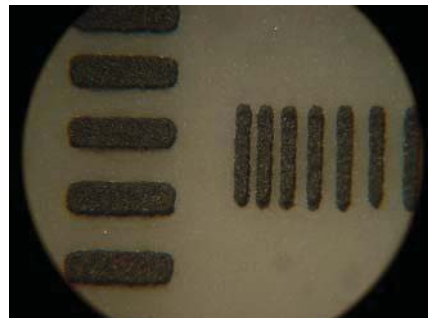
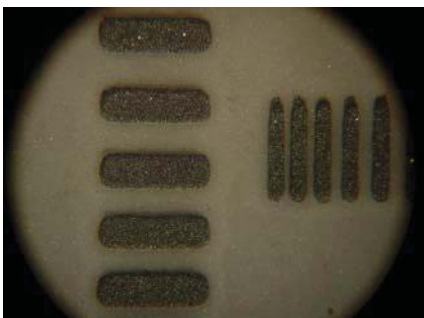
**Wetting:**



**UV Residues:** (Black Fluorescent Light)



**Hot Slump:**



(NOTE: Color dissipates in 150°F test conditions)

**On Stencil:**



Color at 0 hour

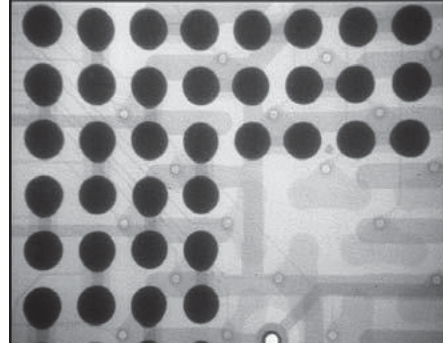
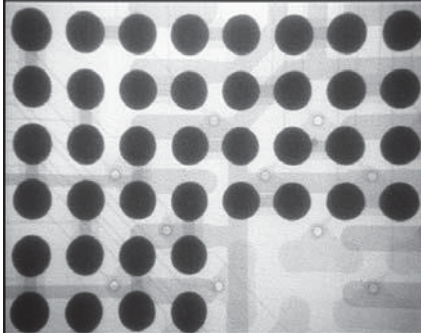


Color after 1 hr. continuous print

**GREEN**

**STANDARD**

**Voids:**



**SIR:** (IPC-J-STD-004B and IPC-TM-650 2.6.3.3)

1.91 x 10<sup>12</sup> ohms

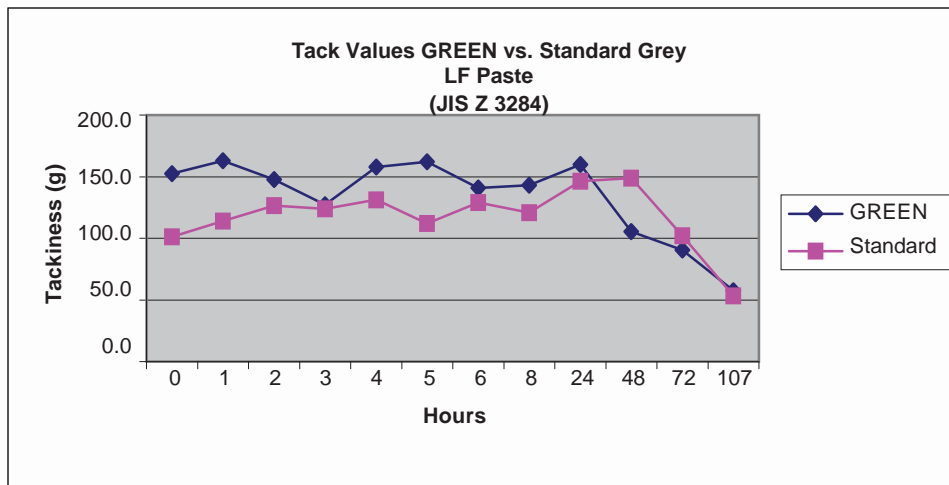
6.44 x 10<sup>12</sup> ohms

**Stability:** (viscosity after environmental exposure)

Initial 187 kcps @ 24.9°C  
 After 4 days @ 40°C 190 kcps @ 25°C

190 kcps @ 25°C  
 191 kcps @ 25°C

**Tack Life:**



LF965-30 (Sn96.5/Ag3.0/Cu0.5), -325+500, 89% Metal -- Solder Paste Tack		
	GREEN	Standard
Hours	Tackiness (gm)	Tackiness (gm)
0	152.5	101.0
1	162.8	113.9
2	147.7	126.4
3	127.2	123.8
4	157.9	131.2
5	161.9	112.0
6	140.9	128.8
8	143.0	120.6
24	159.9	146.1
48	105.4	148.7
72	90.5	102.1
107	57.5	53.2

**Packaging**

6 oz. Jar	250-500 gm
6 oz. Cartridge	500-700 gm
12 oz. Cartridge	1000-1400 gm

**Disposal**

Lead-Free GREEN Delta Solder Paste should be stored in a sealed container away from direct heat and disposed of in accordance with federal, state and local authority requirements.

Qualitek<sup>®</sup> and Delta<sup>®</sup> are brands of Qualitek International, Inc.