



**DELTA 99C  
LEAD FREE  
SOLDER BAR**

**CORPORATE HEADQUARTERS** USA: 315 Fairbank St. Addison, IL • 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 4163 • FAX 63475613717  
**CHINA:** 3B/F, YiPa Print Bldg. 351 # JiHua Rd., Buji Shenzhen, China 518112 • 86 755 28522814 • FAX 86 755 28522787

**Description**

Qualitek® Delta 99C lead free solder bar is manufactured from tin, copper, nickel and germanium processed to create a solder that exceeds most purity specification requirements. Lead free solder alloy, Delta 99C (Sn99.3/Cu0.7/Ni/Ge) shows excellent performance in wave and selective soldering similar to SAC alloys but at lower cost. The addition of nickel reduces copper dissolution and produces bright, shiny joints. Germanium reduces dross formation and promotes solderability.

**Physical Properties**

**Solder Composition**

Qualitek has developed a lead-free, silver-free Delta 99C (Sn99.3/Cu0.7/Ni/Ge) alloy. Qualitek alloys conform to and exceed the impurity requirements of IPC-J-STD-006C.

Typical Analysis														
Sn	Ag	Cu	Pb	Sb	Bi	In	As	Fe	Ni	Cd	Al	Zn	Au	Ge
Bal	0.100 Max	<b>0.60- 0.70</b>	0.070 Max	0.200 Max	0.100 Max	0.100 Max	0.030 Max	0.020 Max	<b>0.04 – 0.07</b>	0.002 Max	0.005 Max	0.003 Max	0.050 Max	<b>0.006- 0.007</b>

	Delta 99C
Melting Point, °C	227 E
Coefficient of Thermal Expansion	Pure Sn= 23.5
Tensile Strength, Mpa	33
Density, g/cc	7.40
Electrical Resistivity (μohm-cm)	13
Thermal Conductivity (J/m-s-K)	64

**Storage and Shelf Life**

Delta 99C solder bar storage should be in a cool, dry environment away from direct heat. We recommend using gloves when handling solder bar directly. Solder bar has an indefinite shelf life.

**Packaging**

Delta 99C lead-free solder bar is available in

- Box of 20      2 lb. bars
- Box of 5      10 lb. bars Equalizer
- Q-Chips      5 lb. container

**Disposal**

Delta 99C solder bar should be disposed of in accordance to all local, regional, national and international regulations.

Qualitek® is a brand of Qualitek International, Inc.