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# Our goal is simple:

# "To Be A Major Supplier And World-Class Producer Of Soldering Materials."

### **Qualitek Worldwide**

Established in 1980, Qualitek International is the fastest growing manufacturer of soldering materials for the electronic assembly industries. Our rapid growth has been the result of our commitment to quality, service and technology. Our continuing expansion of manufacturing facilities worldwide provides immediate availability of our products and technical support to meet the needs of our customers. Today, Qualitek is a major supplier of high quality solder paste, soldering chemicals, and advanced soldering products. We pledge to continue providing customers with the highest level of quality, technology and service into the next century.

### **Quality Assured Products**

An ISO 9002 & QS 9000 Certified Company

To assure a consistent level of quality, inspection of incoming raw materials, in-process monitoring and final testing of the finished products are carried out according to ISO standards. All the appropriate testing is performed accurately and precisely using state-of-the-art instruments to ensure product consistency.

### Research & Development

Qualitek is a proven, proactive manufacturer of innovative soldering products. At Qualitek, our development is "Customer Driven" so we focus on developing the product you require. We even perform testing using the actual assembly equipment to assure the desired results.

#### **Technical Support & Services**

Qualitek's product management group provides technical assistance on the products being used, recommending products for specific applications and solving customer problems. Product specialists are available to visit customers sites to assist in optimizing assembling process and to provide troubleshooting assistance with existing issues, if any.

You can contact us by phone, fax, e-mail and through our web site. We guarantee you our prompt attention.

The data in this catalog is based on information that the manufacturer believed to be reliable and offered in good faith. Qualitek International, Inc. makes no warranties express or implied as to its accuracy and assumes no responsibilities and liabilities arising out of its use by others as conditions and methods of use of the products is beyond the control of Qualitek International, Inc. The user must determine the suitability of the product before using it on a commercial basis. The warranties extend only to the conformity of the product to the physical descriptions. In no event will Qualitek International, Inc. be responsible for special, incidental and consequential damages whether the claim is in contract, negligence or otherwise. Qualitek International, expressly disclaims any implied warranties as to specific use or for any particular purpose.

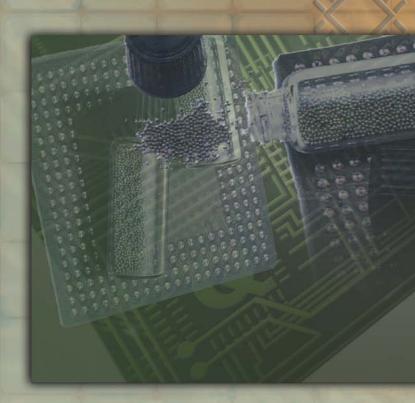
#### Q-Pearl

BGA Solder Spheres

Qualitek International, Inc. manufactures Q-Pearls using a new technology that assures exact alloy composition, consistent and accurate diameters and highly spherical shapes of the spheres. All spheres are made from pure metals combines to provide required alloy composition according to J-STD-006 specification or customer specific. After forming the spheres are classified for size by a precise and non-abrasive sorting process. The diameters of the spheres are monitored and controlled within 0.001" +/-0.0005" tolerance. Sphere size distribution is measured precisely by a sophisticated image analysis system connected to scanning Electron Microscope (SEM). To determine sphericity, sphere diameter is measured in 16 directions ina fraction of a second.

## **Sphere Size & Composition**

Choosing the correct alloy and sphere size is based on the type of BGA package and the processing temperature of your assembly. Solder Spheres in Ball Grid Array packages are used to provide the electrical and mechanical connection between the component and the board assembly.



# Typical Types Of BGA

	_		_		
Types Of	BGA	Alloy	Ball	Diameter	
PBGA	5	3n63/Pb37		0.030"	
	Sn62/Pb36/Ag2				
		LF88			
		SAC			
CBGA	•	Sn10/Pb90 10/Pb88/A		0.025"	
TBGA	9	Sn10/Pb90	)	0.035"	

### **Size Tolerance**

Size	Size	Tole	Tolerance		
(mil)	(mm)	(mil)	(mm)		
12	0.300	0.5	0.012		
14	0.350	0.5	0.012		
16	0.400	0.5	0.012		
20	0.500	1.0	0.025		
25	0.635	1.0	0.025		
30	0.762	1.0	0.025		
35	0.889	1.0	0.025		

## Common Alloys

Alloy Designation	Melting Range In °C			
Sn63/Pb37	183 E			
Sn62/Pb36/Ag2	179-189 268-302			
Sn10/Pb90				
LF88 LF217 LF965-30	188-197 217-221 217-221			

Be Cleaned Immediately

### **Qualitek Paste Fluxes**

Qualitek paste flux is a combination of tackifier and fluxing agent specially formulated for touch-up soldering. BGA packages and flip chip applications. Paste flux may be applied by screen or stencil printing, pin-transfer and syringe dispensing.

Four types of paste flux are available: Rosin Mildly Activated PF 200, Activated Rosin PF 400, No-Clean PF600, and Water-Soluble PF 700.

RMA but lighter

### **Paste Fluxes**

Paste Flux Formula	PF200	PF400	PF600	PF601	PF700
	RMA	RA	No-Clean	No-Clean	Water-Soluble
Туре	Mildly	Fully	No-Clean	No-Clean	Organic
Specifications J-STD-004	Type ROL0	Type ROL1	Type REL0	Type REL0	Type ORM0
reatures	Dispensing	<ul><li>High Activity</li><li>Excellent Wetting</li><li>Chip Scale Packaging</li></ul>	<ul> <li>Similar To Type RMA But Lighter In Residues</li> <li>Residues May Be Left On Without Cleaning</li> </ul>	Lighter In Residues	<ul> <li>Excellent Tackiness</li> <li>Less Corrosive Than Most Organic Types</li> <li>Halogen Free</li> <li>Residues Do Not Need To</li> </ul>