

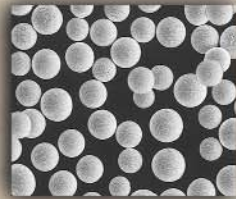
Delta Solder Paste

Delta Solder Paste is a unique blend of low oxide, high purity solder powder with various paste flux formulations. Whether your surface mount assemblies require No-Clean, RMA (Rosin Mildly Activated), or Water-Soluble type solder paste, Qualitek can provide you with the right solder paste to achieve high productivity and reduce production cost. Technical support is readily available to assist with customer processes. Qualitek's application laboratory is fully equipped to evaluate the product performance on SMT assemblies.

Quality Solder Paste Begins With Quality Powder

For over two decades, Qualitek has had the technology to produce superior solder powder characterized by low-oxide levels; uniform particle distribution and spherical shape (free from satellites). Solder powders are produced under an inert atmosphere (nitrogen) with a state-of-the-art atomizing process. All alloys used in our atomizing process are prealloyed from virgin metals that meet or exceed J-STD-006, and ASTM B-32 specifications.

Qualitek utilizes a laser particle size analyzer to determine the particle size range and to monitor the powder atomizing process. A scanning electronic microscope (SEM) is also used to observe the sphericity of the particle shape and satellites, if any, on particle surfaces. Alloy verifications and oxide analysis are conducted as part of our standard routine analysis.



Sn63 Solder Powder
170X By SEM



Sn63 Solder Powder
600X By SEM

No-Clean Solder Paste

Delta no-clean solder paste is formulated for finepitch printability, increased stencil life, high tack force and good wetting. It meets J-STD-004/005 requirements and complies with Bellcore specifications. It is suitable for reflow in air or nitrogen atmosphere. New advanced formulations meet additional performance criteria such as high print speed, maximum stencil open time, pin testable residues and are virtually free from solder-beading and solder balls.

Water-Soluble Solder Paste

Designed for surface mount and other electronic assembly applications. Formulations have been developed for excellent activity, long stencil life and tack time, high print speed capability and a long shelf life.

RA and RMA Solder Paste

Qualitek's RA and RMA solder pastes are designed to meet or exceed J-STD-004/J-STD-005.

No-Clean Solder Paste

| Formulations | 670I | 691A | XP692 | 818 | 615D | 619D |
|------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Main Features | Robust paste, provides good stencil life and excellent wettability. | Designed for pin probability, soft residues spread from joints. | Designed for pin probability, soft residues spread from joints, extended stencil life. | Robust paste, provides good stencil life and excellent wettability. | Designed for syringe dispensing applications, providing excellent wetting. | Designed for syringe dispensing applications, probable soft residues spread from joints. |
| Flux Classification | RELO | RELO | RELO | RELO | RELO | RELO |
| Post Reflow Residues | 4.5-5.0 | 4.0-4.5 | 4.0-4.5 | 5.0-5.5 | 6.0-6.5 | 5.0-5.5 |
| Standard Metal Load | 90% | 89% | 90.2% | 90% | 88% | 88% |
| Activity | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 |
| Residue Color | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 |
| Testability | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 |
| Open Time | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 |
| Printability/Dispensibility | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 |
| Application | Stencil Printing | | | Syringe Dispensing | | |

1=Least, 5=Most

Water-Soluble Solder Paste

| Formulations | 792 | 788 | 798 | XP799 | XP779 | 717D |
|------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------------------------------------------------------------|
| Main Features | Excellent wetting on a variety of metal surfaces. | Excellent wetting on a variety of metal surfaces, with enhanced stencil & tack life. | Exhibits environmental robustness, excellent wetting on a variety of metal surfaces. | Excellent wetting with enhanced stencil & tack life, improved cleanability. | Exhibits environmental robustness, enhanced slump, reduced void formation. | Designed for syringe dispensing applications. Excellent activity. |
| Flux Classification | ORMO | ORLO | ORLO | ORL1 | ORL1 | ORLO |
| Residue Removal | DI Water 120-140°F | DI Water 120-140°F | DI Water 120-140°F | DI Water 120-140°F | DI Water 120-140°F | DI Water 120-140°F |
| Standard Metal Load | 90% | 89% | 89% | 90% | 90% | 87% |
| Activity | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 |
| Cleanability | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 |
| Open Time | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 |
| Printability/Dispensibility | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 | 1 ██████████ 5 |
| Application | Stencil Printing | | | Syringe Dispensing | | |

1=Least, 5=Most

RA & RMA Solder Paste

| Formulations | 230 RMA | 350 RA | 215D RMA | 315D RA |
|----------------------------|----------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|
| Main Features | Excellent activity. Good printability. | Excellent activity. Good printability. For harder to solder surfaces. | Excellent activity. Excellent dot to dot consistency. | Excellent activity. Excellent dot to dot consistency. |
| Flux Classification | ROLO | ROM1 | ROLO | ROMO |
| Residue Removal | Solvent/Semi-Aqueous | Solvent/Semi-Aqueous | Solvent/Semi-Aqueous | Solvent/Semi-Aqueous |
| Standard Metal Load | 90% | 90% | 86% | 86% |
| Application | Stencil Printing | | Syringe Dispensing | |



Solder Powder & Particle Type

| Alloy Designation | Melting Range In °C | Available Particle Type |
|-------------------|---------------------|-------------------------|
| Sn63/Pb37 | 183 E | 2,3,4,5,6 |
| Sn62/Pb36/Ag2 | 179-189 | 2,3,4,5,6 |
| Sn10/Pb88/Ag2 | 268-299 | 2,3,4,5 |
| Sn10/Pb90 | 268-302 | 2,3,4,5 |
| Sn43/Pb43/Bi14 | 144-163 | 2,3,4,5 |

Refer to lead free brochure for additional alloys.

Particle Size Chart

| Mesh Size | Microns Size | Particle Type |
|-----------|--------------|---------------|
| -200+325 | 75-45 | 2 |
| -325+500 | 45-25 | 3 |
| -400+635 | 38-20 | 4 |
| -500 | 25-15 | 5 |
| -635 | 15-5 | 6 |

Paste Packaging Options

| Type Designation | Description | Net Weight |
|-------------------------|---------------------------------------|-------------------------|
| Jar | 3 - 4 oz., Jar | 250 - 500 grams |
| Semco & Pyle Cartridges | 6 oz., Cartridge 12 oz., Cartridge | 700 grams 1400 grams |
| Syringe | 10cc., Syringe 30cc., Syringe | 35 grams 100 grams |
| DEK Pro Flow | 8oz., Cassette | 800 grams |