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CircuitWorks® — Portable Solutions for Your Electronic Needs

CircuitWorks® brand's comprehensive line of conveniently packaged and precision dispensing rework and repair products makes circuit board repair and prototyping faster, easier and more accurate. Advanced-formula materials packaged in unique delivery systems ensure superior performance and pinpoint accuracy. The full range of products meets all of the technicians needs for electronics rework and prototyping — repairing, cleaning, protecting, lubricating, bonding, and restoring electrical conductivity to circuit boards and components.

CircuitWorks® Products are compliant with IPC-7711 Rework of Electronic Assemblies, and ANSI/J-STD-001.

All CircuitWorks® branded products are available on folded blister cards complete with multi-lingual instructions and regulatory information.

CircuitWorks® Repair and Prototype Tools are grouped in the following product areas: Repair/Cleaning Products; Adhesives/Epoxies; and Lubricants.

Lubricants



NEW!

CircuitWorks® Boron Nitride Heat Sink Grease

The syringe dispenser for precise application of an ultra-high efficiency, thermally conductive grease

- Provides maximum thermal conductivity with superior dielectric properties
- Silicone free compound will not harden or dry out
- Electrically insulative; noncorrosive and nonflammable
- Thermally stable from -99.4°F/-73°C to 392°F/200°C
- Exceeds MIL-C-47113 for Thermal Conductivity

Applications:

- Formulated for maximum heat transfer between circuit components and heat sinks without electrical conductivity

CW7250

3.4 g (0.12 oz)



NEW!

CircuitWorks® Silicone Free Heat Sink Grease

The convenient syringe dispenser for precise application of silicone free heat-sink grease

- Silicone free compound will not harden or dry out
- Excellent thermal conductivity and dielectric properties
- Non-corrosive
- Thermally stable from -5°F/-15°C to 392°F/200°C
- Exceeds MIL-C-47113 for thermal conductivity

Applications:

- Excellent heat transfer between circuit components and heat sinks, without any silicone migration

CW7270

8 g (0.28 oz)

CircuitWorks® Heat Sink Grease

The tube dispenser for precise application of silicone compound that facilitates heat transfer away from electronics and electrical components

- Excellent thermal and dielectric properties
- Will not dry out, harden, or melt
- Noncorrosive and nonflammable
- Thermally stable from -40°F/-40°C to 342°F/172°C
- Meets MIL-DTL-47113D Type I

Applications:

- Facilitates heat transfer between circuit components and heat sinks

CT40-5

142 g (5 oz)

CircuitWorks® Silver Conductive Grease

The syringe dispenser for precise application of grease to provide superior electrical and thermal conductivity, lubrication and protection

- Maximum electrical and thermal conductivity
- Protects against moisture and corrosion
- Thermally stable over a wide temperature range
- Conductive lubricant containing pure silver

Applications:

- Fills connector gaps to maximize electrical and thermal conductivity
- Controls static discharge
- Grounds circuits

CW7100

6.5 g (0.23 oz)

CircuitWorks® Gold Guard™ Pen

The pen for cleaning and lubricating gold and other noble metal contacts and connectors

- Cleans and leaves protective polyphenyl ether lubricant in one step
- Chisel tip marker for exact delivery to the contact
- Safe on plastics

Applications:

- Cleans and lubricates gold contacts
- Extends life of noble metal contacts

CW7400

8.5 g (0.3 oz)



Repair/Cleaning Products



CircuitWorks® Conductive Pen

The pen dispenser for drawing highly conductive silver traces, jumpers and shielding with precision and control

- Quickly creates conductive silver traces
- Valved pen tip for easy applications
- Solderable at low temperatures
- Dries in minutes at room temperature
- Choice of Micro Tip for fine lines or Standard Tip for wider lines

Applications:

- Repairs traces
- Links components
- Makes smooth jumpers
- Shields electronics

CW2200STP	Standard Tip	8.5 g (0.3 oz)
CW2200MTP	Micro Tip	8.5 g (0.3 oz)

CircuitWorks® Nickel Conductive Pen

The pen dispenser for economically drawing conductive traces, jumpers and shielding

- Quickly creates conductive nickel traces on most surfaces
- Easy and economical to use
- Valved pen tip for easy applications
- Dries in minutes at room temperature

Applications:

- Economically repairs traces, links components, and shields electronics

CW2000	Standard Tip	9 g (0.32 oz)
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CircuitWorks® Flex Conductive Pen

The micro-tip pen for drawing conductive traces on flexible and ITO surfaces

- Quickly creates flexible conductive silver traces on flex circuitry
- Micro tip for precise applications
- Dries in minutes at room temperature
- Highly adherent silver-based polymer system

Applications:

- Repairs conductive traces on flexible circuits and indium tin oxide components

CW2900	8.5 g (0.3 oz)
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CircuitWorks® Overcoat Pen

The pen dispenser for precise application of a tough protective acrylic conformal coating

- Simple to use, single component system
- Hard, durable coating
- High dielectric strength helps prevent electrical discharge
- Dries quickly at room temperature
- Protects against moisture and abrasion damage
- Meets requirements of MIL-I-46058C and IPC-CC-830A
- Choice of clear, green or blue coating

Applications:

- Insulates and protects conductive pen traces
- Repairs permanent solder mask
- Prevents shorting and arcing

CW3300C	Clear	4.9 g (0.16 oz)
CW3300G	Green	4.9 g (0.16 oz)
CW3300B <i>NEW!</i>	Blue	4.9 g (0.16 oz)

CircuitWorks® Epoxy Overcoat

The conveniently-packaged epoxy system that provides a tough, thermally stable, epoxy protective conformal coating

- Provides a hard, durable, protective green coating
- Excellent dielectric properties; help prevent electrical discharge
- Protects against moisture and abrasion
- Ideal for pre-reflow solder resist repair
- Service temperature from -55°F/-48°C to 600°F/315°C
- Meets the requirements of IPC-7721, 2.4.1

Applications:

- Ideal for repairing permanent solder mask before reflow applications
- Protects circuits and prevents shorting and arcing

CW2500	7.4 g (0.26 oz) total
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CircuitWorks® Rubber Keypad Repair Kit

The conveniently-sized kit for permanent repair of rubber keypads

- Restores electrical conductivity to worn carbon contacts
- Forms a tough, flexible, wear-resistant surface
- Repairs over 50 rubber button contacts

Applications:

- Restores rubber and telephone keypads
- Restores flexible carbon contacts

Single Pack

CW2605	Adhesive	3 g (0.1 oz)
	Curing Agent	0.3 g (0.01 oz)

CircuitWorks® Flux Dispensing Pen

The pen for applying flux with precision and control

- Chisel tip marker provides exact delivery of flux to surface
- Easily removed with appropriate CircuitWorks® Flux Remover Pen

Applications:

- All soldering applications where water soluble, rosin or no clean flux is required

Water Soluble Flux Dispensing Pen:

CW8300 9 g (0.32 oz)

- Applies a neutral pH organic water soluble flux for rapid soldering
- Chisel tip marker provides exact delivery of flux to surface
- Flux meets ANSI/IPC J-STD-004, ORH1 Classification
- Easily removed with water or Flux-Off® Water Soluble
- RoHS Compliant

Lead-Free Flux Dispensing Pen:

CW8400 9 g (0.32 oz)

- Applies a noncorrosive, halide free, no clean flux for high temperature, lead-free application
- Can also be used to for Tin/Lead fluxes
- Flux meets Bellcore TR-N-NWT-000078 and IPC SF-818 for Surface Insulation Resistance
- Flux meets ANSI / IPC J-STD-004, Type ROLO
- Easily removed with Lead-Free Flux Remover Pen, or Flux-Off® Lead-Free Flux Remover
- RoHS Compliant

No Clean Flux Dispensing Pen:

CW8100 9 g (0.32 oz)

- Applies a patented noncorrosive, halide free, organic no clean flux
- Flux meets Bellcore TR-N-NWT-000078 and IPC SF-818 for Surface Insulation Resistance
- Flux meets ANSI/IPC J-STD-004, Type ROLO
- RoHS Compliant

Rosin Flux Dispensing Pen:

CW8200 9 g (0.32 oz)

- Applies a noncorrosive, nonconductive Type R flux
- Flux meets MIL-F-14256 F Type R and ANSI/IPC J-STD-004, Type ROLO
- RoHS Compliant



CircuitWorks® Lead-Free Flux

The convenient, easy-to-use flux for lead-free applications

- Noncorrosive, halide-free and no-clean flux
- High thermal stability
- Excellent material compatibility
- RoHS compliant, fast drying
- Can be used for soldering with lead-free or Tin/Lead solders
- Flux passes J-STD-004 Surface Insulation Resistance Testing IPC-TM 650 Test Method 2.6.3.3

Applications:

- Printed circuit boards
- Chip carriers
- Surface mount device pads
- Switches and sockets

CW3220 32 ounces (1 qt)



CircuitWorks® Lead-Free Pocket Solder

The lead free, high purity pocket sized solder dispenser for convenient rework and repair

- Precision manufactured Lead-Free solder alloy
- 96.5% Tin (Sn), 3.0% Silver (Ag), 0.5% Copper (Cu)
- Type ROLO flux per IPC J-STD-004
- Ensures even, reliable solder connections
- Cleans and wets heavily tarnished copper surfaces
- RoHS Compliant

Applications:

- SAC 305 for soldering lead-free applications

S200 1.0 mm (0.04") Diameter,
3.18 m (125") Length

CircuitWorks® No-Clean Tacky Flux

The conveniently packaged no-clean flux gel formulated for easy BGA rework

- Precision syringe applicator
- Long tack time, extended shelf life
- No refrigeration required
- Noncorrosive, halide and halogen free
- Meets IPC requirements for ROLO, No Clean
- Excellent consistency with stable viscosity
- Conforms to ISO 9454
- Meets Bellcore TR-NWT-000078 requirements
- Meets DIN EN 29454-1 1.1.3.C classification
- RoHS Compliant

Applications:

- Ideal for BGA rework applications

CW8500 3.5 gm (0.12 oz) Syringe



CircuitWorks® Lead-Free Flux Remover Pen

The pen for removing lead-free flux with precision and control

- Completely removes lead free flux residues in seconds
- Can also be used to remove Tin/Lead fluxes
- Marker dispenser provides controlled and exact application
- Dries fast
- RoHS Compliant

CW9400 9 g (0.32 oz)

CircuitWorks® Flux Remover Pen

The pen for precise removal of flux from printed circuit boards

- Completely removes flux in seconds
- Spot cleans tight tolerance areas on circuit boards
- Marker dispenser provides controlled spot cleaning
- Dries fast
- RoHS Compliant

Applications:

- All cleaning applications where rosin or no clean flux must be removed

No Clean Flux Remover Pen:

CW9100 9 g (0.32 oz)

Rosin Flux Remover Pen:

CW9200 8 g (0.28 oz)



CircuitWorks® Conformal Coating Remover Pen

The pen for precise removal of silicone, acrylic and urethane coatings from PCBs

- Spot cleans tight tolerance areas on circuit boards
- Marker dispenser provides controlled and exact application
- Evaporates quickly
- Provides low surface tension for superior wetting
- Low VOC content

Applications:

- Removes most types of conformal coatings

CW3500 9 g (0.32 oz)

CircuitWorks® The Mighty Pen®

The powerful universal cleaning pen

- Outstanding cleaning ability
- Marker dispenser provides controlled and exact application
- Mild citrus aroma
- U.S. Patent 6,677,291 and 6,677,292, and foreign patents

Applications:

- General purpose cleaning and refurbishing of equipment
- Removes ink stains, label adhesives, and difficult to remove soils

CW3700 11 g (0.39 oz)

CircuitWorks® BA Dispensing Pens

The empty pen for easy filling, dispensing, and applying all types of liquids

- Fill with your choice of liquids; fluxes, cleaning solvents, oils, etc.
- Wide opening allows easy filling
- Wide base permits the pen to stand upright on your work bench, minimizing footprint
- Tough and durable body, valve and nib
- Anti-roll cap prevents pen from rolling off bench top



Applications:

- Portable and convenient way to apply the specific flux for your process
- Dispensing lubricants, contact preservatives or coatings
- Can be used with inks or marking materials

CW7000 2 Empty Pens per Package



Adhesives/Epoxies



CircuitWorks® Conductive Epoxy

The conveniently-packaged epoxy for precision repairs and high-strength conductive bonding

- Conductive silver epoxy provides excellent electrical and thermal conductivity
- Fully cured material offers high strength bonds
- Mixed material provides five minute work time, fast cure
- Repairs defective traces and creates jumpers on boards
- Quick solderless electronic connections

Applications:

- Repairs traces and temperature sensitive circuits
- Makes high-strength solderless conductive connections

CW2400 Adhesive 7 g (0.25 oz)
Hardener 7 g (0.25 oz)

CW2400J NEW! Adhesive 10 g (0.35 oz)
Hardener 10 g (0.35 oz) in jars

CircuitWorks® 60 Minute Conductive Epoxy

The conveniently-packaged epoxy system with an extended pot life for high strength conductive bonds



- Conductive silver epoxy provides excellent electrical and thermal conductivity
- Fully cured material offers high strength bonds
- Extended pot life provides sixty minute work time
- Repairs defective traces and creates jumpers on boards
- Quick solderless electronic connections

Applications:

- Longer pot life provides extended work time
- Makes high-strength solderless conductive connections

CW2460 Adhesive 10 g (0.35 oz)
Hardener 10 g (0.35 oz) in jars



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Still not sure which product is right for your application? ITW Chemtronics' sales and technical services staff are ready with expert guidance on product selection – ensuring that you have the information necessary to make the right choice.

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