RoHS WEEE Compliant

CircuitWorks® 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, bonding, and restoring electrical conductivity to circuit boards and components.

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

Conductive Ink

Conductive Ink Applications:

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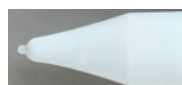- Makes smooth jumpers
- Shields electronics

CircuitWorks® Conductive Pen

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

- Quickly creates highly 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

CW2200STP	Standard Tip	8.5 g / 0.3 oz
CW2200MTP	Micro Tip	8.5 g / 0.3 oz

Standard Tip　　*Micro Tip*

CircuitWorks® Nickel Conductive Pen

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

CW2000	Standard Tip	9 g / 0.32 oz

CircuitWorks® Flex Conductive Pen

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

CW2900	Micro Tip	8.5 g / 0.3 oz

CircuitWorks® Rubber Keypad Repair Kit

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

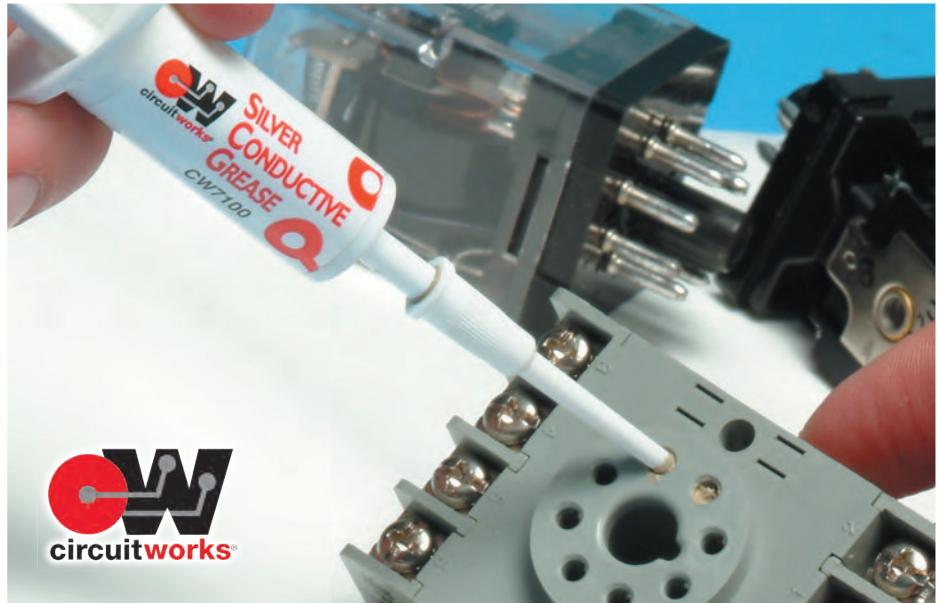|		
CW2605	Adhesive	3 g / 0.1 oz
	Curing Agent	0.3 g / 0.01 oz

Conductive Grease

CircuitWorks®
Silver Conductive Grease

Grease for superior electrical and thermal conductivity, lubrication and protection

- Fills connector gaps to maximize electrical and thermal conductivity
- Protects against moisture and corrosion
- Thermally stable over a wide temperature range
- Conductive lubricant containing pure silver
- Controls static discharge
- Grounds circuits

CW7100   6.5 g / 0.23 oz

Thermal Compounds

For fast, efficient heat transfer between circuit components and heat sinks.

CW7250

CW7270

CT40-5

CircuitWorks® Boron Nitride Heat Sink Grease

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 -99.4ºF/-73ºC to 392ºF/200ºC
- Exceeds MIL-C-47113 for Thermal Conductivity

CW7250   3.4 g / 0.12 oz

CircuitWorks® Silicone Free Heat Sink Grease

Non-contaminating 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 -5ºF/-15ºC to 392ºF/200ºC
- Exceeds MIL-C-47113 for thermal conductivity

CW7270   8 g / 0.28 oz

CircuitWorks® Heat Sink Grease

Silicone compound for 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 -40ºF/-40ºC to 342ºF/172ºC
- Meets MIL-DTL-47113D Type I

CT40-5   142 g / 5 oz

Conductive Epoxies

Conductive Epoxy Applications:

- Repair traces and temperature sensitive circuits
- Make high-strength solderless conductive connections

CW2460

CircuitWorks®
Conductive Epoxy

Epoxy for precision repairs and high-strength conductive bonding

- Conductive silver epoxy provides excellent electrical conductivity
- High strength conductive bond with a five minute work time
- Repairs defective traces and creates jumpers on boards
- Quick solderless electronic connections

CW2400 Adhesive 7 g / 0.25 oz
            Hardener 7 g / 0.25 oz

CircuitWorks®
60 Minute Conductive Epoxy

Epoxy system with extended pot life for high strength conductive bonds

- Conductive silver epoxy provides excellent electrical conductivity
- Sixty minute work time provides a high strength conductive bond
- Extended pot life provides increased work time
- Repairs defective traces and creates jumpers on boards
- Quick solderless electronic connections

CW2460 Adhesive 10 g / 0.35 oz
            Hardener 10 g / 0.35 oz in jars

Protective Overcoats

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 MIL-I-46058C and IPC-CC-830A

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	Blue	4.9 g / 0.16 oz
CW3300BLACK	Black	4.9 g / 0.16 oz
CW3300WHITE	White	4.9 g / 0.16 oz

CircuitWorks® Epoxy Overcoat

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 Adhesive Syringe 4 g / 0.14 oz
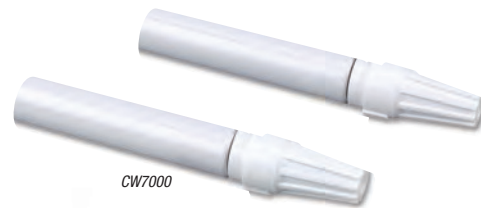   Hardener Syringe 3.4 g / 0.12 oz

Flux / Solder

CW8100

CW8700

CW7000

CircuitWorks®
Flux Dispensing Pens

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

No Clean Flux Dispensing Pen

- Applies a patented noncorrosive, halide free, 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 ROL0

CW8100   9 g / 0.32 oz

Lead-Free Flux Dispensing Pen

- Applies a noncorrosive, halide free, no clean flux for high temperature, lead-free application
- Can also be used for tin/lead solders
- Flux meets Bellcore TR-N-NWT-000078 and IPC SF-818 for Surface Insulation Resistance
- Flux meets ANSI / IPC J-STD-004, Type ROL0
- Easily removed with Lead-Free Flux Remover Pen, or Flux-Off® Lead-Free Flux Remover

CW8400   9 g / 0.32 oz

Rosin Flux Dispensing Pen

- Applies a noncorrosive, nonconductive Type R flux
- Flux meets MIL-F-14256 F Type R and ANSI/IPC J-STD-004, Type ROL0

CW8200   9 g / 0.32 oz

Water Soluble Flux Dispensing Pen

- Applies a neutral pH organic water soluble flux for rapid soldering
- Flux meets ANSI/IPC J-STD-004, ORH1 Classification
- Easily removed with water or Flux-Off® Water Soluble (pg. 12)

CW8300   9 g / 0.32 oz

CircuitWorks®
No-Clean Tacky Flux

Conveniently packaged no-clean flux gel formulated for easy BGA rework

- Formulated for No-Clean applications
- Syringe applicator provides exact delivery of flux
- Long tack time, extended shelf life
- No refrigeration required
- Noncorrosive, halide and halogen free
- Meets IPC requirements for ROL0, No Clean
- Conforms to ISO 9454
- Meets Bellcore TR-NWT-000078 requirements
- Meets DIN EN 29454-1 1.1.3.C classification
- RoHS Compliant

CW8500   3.5 g / 0.12 oz Syringe

CircuitWorks®
Lead-Free Tacky Flux

Conveniently packaged flux gel formulated for easy lead-free BGA rework

- Specifically formulated for the higher temperature requirements of lead free applications
- Syringe applicator provides exact delivery of flux
- Long tack time, extended shelf life
- No refrigeration required
- Noncorrosive, halide and halogen free
- Meets IPC requirements for ROL0, No Clean
- Conforms to ISO 9454
- Meets Bellcore TR-NWT-000078 requirements
- Meets DIN EN 29454-1 1.1.3.C classification

CW8700   3.5 g / 0.12 oz Syringe

circuitworks®

CircuitWorks®
BA Dispensing Pen

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

CircuitWorks®
Lead-Free Pocket Solder

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

- SAC 305 for soldering lead-free applications
- 96.5% Tin (Sn), 3.0% Silver (Ag), 0.5% Copper (Cu)
- Type ROL0 flux per IPC J-STD-004
- Ensures even, reliable solder connections
- Cleans and wets heavily tarnished copper surfaces

S200   1.0 mm / 0.04" Diameter, 3.18 m / 125" Length

CW8200

CW8300

Cleaning and Lubricating Pens

CircuitWorks® Conformal Coating Remover Pen

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

CW3500   9 g / 0.32 oz

CircuitWorks® Flux Remover Pen

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

No Clean Flux Remover Pen

CW9100   9 g / 0.32 oz

Rosin Flux Remover Pen

CW9200   8 g / 0.28 oz

CircuitWorks® Lead-Free Flux Remover Pen

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

CW9400   9 g / 0.32 oz

CircuitWorks® Gold Guard™ Pen

Pen for cleaning and lubricating gold and other noble metal contacts and connectors

- Cleans and leaves protective polyphenyl ether lubricant in one step
- Extends life of noble metal contacts
- Chisel tip marker for exact delivery to the contact
- Safe on plastics

CW7400   8.5 g / 0.3 oz

CircuitWorks® The Mighty Pen®

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

Fiber-Wash™ Fiber Optic Cleaning Pens

- Specifically formulated for cleaning all fiber optic connectors
- Removes handling soils, dust, oils and airborne contamination
- Cleans alone or in combination with the SqR™, p-QbE®, QbE® Cleaning Platforms
- Cleans and eliminates electrostatic deposits of airborne contaminants
- Completely portable; controlled dispensing of cleaning solution

Fiber-Wash™ MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner

FW2150	9 g / 0.32 oz pen
FW2150BLK	Box of 24 pens, 9g each

Fiber-Wash™ AQ Precision Cleaner Pen
Nonflammable, aqueous fiber optic cleaner

FW2190	5 g / 0.2 oz pen

Fiber-Wash™ NF Precision Cleaner Pen
Nonflammable, fast drying fiber optic cleaner

FW2170	10 g / 0.4 oz pen