



2017

product catalog

Superior products for electronic
prototyping, assembly and maintenance



Chemtronics®

Nothing Performs Like Chemtronics



Tri-V™ – Safer, Nonflammable High Performance nPB Replacement Chemistry

Cleaning solvent choices are being constrained by regulations, safety concerns and cost. **Chemtronics Tri-V™ High Performance Solvents** expand cleaning chemistry options. These engineered cleaning solutions offer powerful cleaning performance for vapor degreasing, ultrasonic cleaning and cold cleaning.

- Cost and cleaning performance of n-propyl bromide (nPB), but without the safety concerns.
- Aerosol and bulk packaging available for benchtop cleaning, immersion cleaning, or in a vapor degreaser.
- Available in Electro-Wash® Tri-V for electronic cleaning, Max-Kleen™ Tri-V™ for heavy-duty cleaning, and Flux-Off® Tri-V™ for removing flux from electronic assemblies.

Chemtronics offers a wide variety of other high performance solvent cleaners:



Delta – Powerful, nonflammable AK225 replacement chemistry

VZ

Verizane™ – Nonflammable and effective on most sensitive plastics

CZ

Cirozane™ – Nonflammable and safest on sensitive plastics

Contact Chemtronics today! Application specialists are ready to identify the best choice for you.

770-424-4888 | 800-645-5244 • askchemtronics@chemtronics.com



nPB Replacements for Greater Safety

n-propyl bromide (also known as nPB or 1-Bromopropane, CAS 106-94-5) is under close scrutiny by local and national government officials and health and safety managers because of safety concerns.

Studies have shown that exposure to nPB can cause negative neurological and reproductive effects. The National Toxicology Program (NTP) has stated that nPB is “reasonably anticipated to be a human carcinogen”, based on increased lung, large intestine and skin cancers observed in animal studies.

OSHA has issued a Hazard Alert detailing worker safety concerns. The American Conference of Governmental Industrial Hygienists (ACGIH) recommends a 10 ppm time-weighted average threshold limit, but has proposed a lower 0.1 ppm (ACGIH 2013). (Source: OSHA Hazard Alert - https://www.osha.gov/dts/hazardalerts/1bromopropane_hazard_alert.html)

Safety, regulatory and liability concerns are driving the change from nPB, and Chemtronics® has the ideal replacements with Tri-V™ High Performance Solvents. Electro-Wash® Tri-V, Max-Kleen™ Tri-V, and Flux-Off® Tri-V offer the cost and cleaning performance of nPB, but with much greater safety!



NEW!



VW1614



VW114



VW514



DEL2201



DEL101

Electro-Wash® Tri-V

Extra-strength, nonflammable electronics cleaner degreaser for replacing n-propyl bromide

- Nonflammable
- Can be used on energized equipment
- Fast drying
- Does not contain n-propyl bromide, trichloroethylene, or perchloroethylene

VW1614 12 oz / 340 g aerosol
VW114 1 gal / 3.7 L liquid
VW514 5 gal / 19 L liquid
VW5514 53 gallons / 200 L liquid



Electro-Wash® Delta

Extra-strength, nonflammable electronics cleaner degreaser

- Nonflammable
- Best AK225 replacement chemistry
- Fast drying
- Contains no ozone depleting compounds, low VOC's

DEL1601 12 oz / 340 g aerosol
DEL2201 19 oz / 538 g aerosol
DEL101 1 gal / 3.7 L liquid
DEL5501 53 gal / 200 L liquid



Product Selection Guide

Product Selection Guide														
Cleaner Degreasers	Features					Cleaning Ability			Cleaning Methods					
	Plastic Safe	Nonflammable	No Ozone Depleting Chemicals	Dries Fast	Dielectric Breakdown (Aerosol)	Grease	Oil	Ionic Soils	Aerosol Spray	Vapor Degreasing	Ultrasonics	Hot Immersion	Cold Immersion	
Electro-Wash® Tri-V		✓	✓	✓	8kV	1	1	2	✓	✓	✓		✓	Strongest Cleaner
Electro-Wash® Delta		✓	✓	✓	31kV	2	1	2	✓		✓		✓	
Electro-Wash® NX0		✓	✓	✓	15kV	1	1	2	✓	✓	✓		✓	
Electro-Wash® QD	✓	✓	✓	✓	11kV	3	1	2	✓					
Electro-Wash® VZ		✓	✓	✓	17kV	3	1	2	✓	✓	✓		✓	
Electro-Wash® PX	✓		✓	✓		1	1	1	✓				✓	
Electro-Wash® MX	✓		✓			1	1	1	✓					
Electro-Wash® PR	✓		✓	✓		1	1	-	✓					
Electro-Wash® CZ	✓	✓	✓	✓	17kV	3	2	2	✓	✓	✓		✓	
Electro-Wash® Two Step		✓	✓			1	1	1			✓	✓	✓	Most Plastic-Safe
Industrial Degreasers														
Max-Kleen™ Tri-V		✓	✓	✓	8kV	1	1	2	✓	✓	✓		✓	
Max-Kleen™ Citrus		✓	✓		62kV	2	2	2	✓		✓	✓	✓	
Max-Kleen™ Citrus HF			✓		62kV	1	1	3	✓					
1 – Excellent 2 – Good 3 – Fair														

1 – Excellent 2 – Good 3 – Fair



Electro-Wash® High Purity Solvents are the most effective products made for critical cleaning and degreasing. Each cleaner is engineered for specific applications — from precision cleaning of sensitive equipment to heavy duty degreasing. Electro-Wash® cleaner degreasers clean a wide variety of soil, oil, grease, oxides and handling contamination from equipment and assemblies.



Electro-Wash® QD

Fast drying, nonflammable electronics cleaner degreaser

- Nonflammable, nonchlorinated
- Excellent material compatibility
- Displaces moisture
- Evaporates fast, minimizes down time

DEL1608B 12 oz / 340 g aerosol

Electro-Wash® VZ

Economical, non-ozone depleting, nonflammable universal cleaner degreaser

- Nonflammable
- One cleaner for all soil types
- Low odor
- Evaporates quickly without leaving residue
- Penetrates to clean hard to reach areas

ES6100 12 oz / 340 g aerosol

ES6119 19 oz / 538 g aerosol

ES6101 1 gal / 3.7 L liquid

ES6155 53 gal / 200 L liquid

NEW!



DEL1608B

ES6100

ES6119



Electro-Wash® MX

Extra-strength, plastic safe universal cleaner with moderate evaporation time

- Safe on plastics
- Flammable
- Extra cleaning strength
- Moderate evaporation rate increases cleaning power
- Leaves no residue
- Removes organic and ionic soils

ES1621 10 oz / 283 g aerosol

CP421 25 - 8" x 10" / 20.3 cm x 10" / 25.4 cm premoistened wipes (9 ml each)

FW2150 9 g / 0.32 oz pen

Electro-Wash® CZ

Non-ozone depleting, nonflammable cleaner degreaser safe for use on plastics

- Safe on plastics
- Nonflammable
- Dries fast
- Leaves no residue

ES7100 12 oz / 340 g aerosol

ES7101 1 gal / 3.7 L liquid

Electro-Wash® NX0

Extra-strength, nonflammable cleaner degreaser

- Nonflammable
- Extra cleaning strength
- Dries fast
- Leaves no residue
- Test on plastics

ES1607 12 oz / 340 g aerosol

ES107 1 gal / 3.7 L liquid

Electro-Wash® PX

Extra-strength universal cleaner and degreaser safe for use on plastics

- Safe on plastics
- Flammable
- Extra cleaning strength
- Dries fast
- Leaves no residue
- Removes organic and ionic soils

ES810 5 oz / 141 g trigger aerosol

ES1210 12.5 oz / 354 g aerosol

ES110 1 gal / 3.7 L liquid

Electro-Wash® Two Step

Extra-strength, nonflammable ultrasonic and immersion cleaner

- Nonflammable
- Extra cleaning strength
- Leaves no residue when rinsed with Electro-Wash PX or Electro-Wash CZ
- Increasing temperature increases solvency

ES125A 1 gal / 3.7 L liquid

Electro-Wash® PR

Regular-strength cleaner safe for use on plastics

- Safe on plastics
- Flammable
- Dries fast
- Leaves no residue

ES1603 10 oz / 283 g aerosol



ES1621

ES7100



ES1607

ES107



ES125A

ES1603

Heavy-Duty Degreasers



Max-Kleen™ Heavy-Duty Degreasers rise to the challenge of your most difficult jobs. These industrial strength cleaners offer fast, easy removal of grease, tar, asphalt, oil and grime. The extra-strength your toughest degreasing jobs require.



VV179



VV2279



ES189



ES2289



ES2291

Max-Kleen™ Tri-V™

Extra-strength, nonflammable heavy duty degreaser for replacing n-propyl bromide

- Nonflammable
- Can be used on energized equipment
- Fast drying
- Does not contain n-propyl bromide, trichloroethylene, or perchloroethylene

VV2279	20 oz / 567 g aerosol
VV179	1 gal / 3.7 L liquid
VV579	5 gal / 19 L liquid
VV5579	53 gallons / 200 L liquid

Max-Kleen™ Citrus

Citrus-based extra-strength degreaser

- Citrus-based formula
- Engineered for fast removal of oxidized grease, sludge, wax, tar and oil
- Dielectric strength of 62 kV
- Does not contain chlorinated solvents
- Safe on most metals and plastics
- Non-corrosive and nonconductive
- NSF Registered — Nonfood Compounds/Code C1

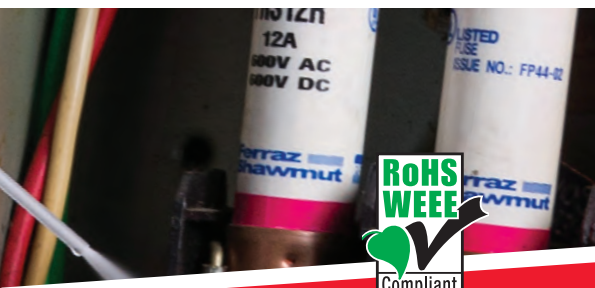
ES2289	15 oz / 425 g aerosol
ES189	1 gal / 3.7 L liquid
ES589	5 gal / 19 L liquid
ES5589	53 gallons / 200 L liquid

Max-Kleen™ Citrus HF

High flashpoint citrus-based degreaser for heavy greases

- Citrus-based formula with moderate evaporation
- Quickly removes all types of tough soils including oxidized oil and grease
- Safe for use on most metals and plastics
- Flashpoint greater than 140° F
- Non-corrosive and nonconductive
- Low Toxicity
- Leaves no residue

ES2291	13.5 oz / 383 g aerosol
ES191	1 gal / 3.7 L liquid
ES5591	53 gallons / 200 L liquid



Pow-R-Wash™ High Purity Formulations remove environmental contaminants and protect contacts from corrosion and frictional wear. Contact cleaners restore electrical continuity to all electronic and electrical contacts by penetrating and removing insulating oil and grease, conductive carbon soil, and insulative oxides from contact surfaces. By restoring full circuit continuity, Chemtronics contact cleaners improve the performance of all equipment that rely on electrical contacts.



Pow-R-Wash™ Delta
Nonflammable cleaner safe for use on powered-up contacts and surrounding plastics

- Nonflammable
- Best AK225 replacement chemistry
- Fast drying
- Dielectric breakdown 30 kV
- Contains no ozone depleting compounds, low VOC's

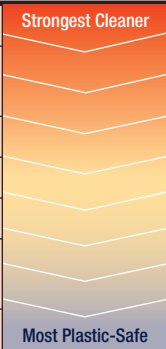
DEL1681 12 oz / 340 gm aerosol

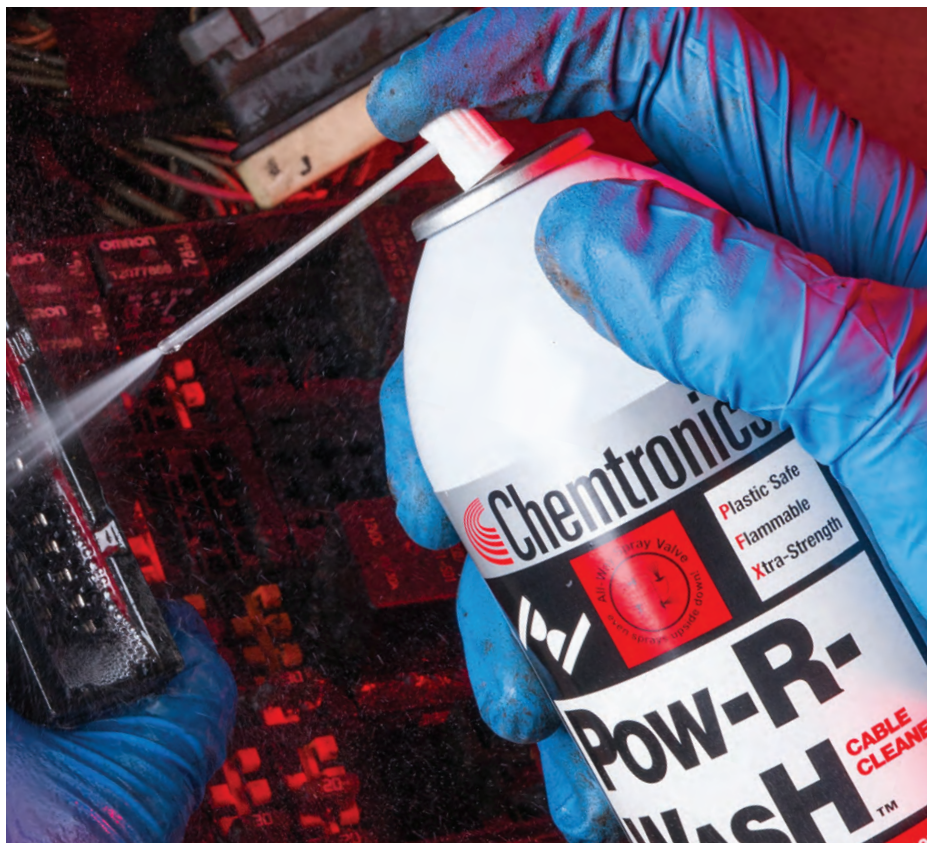


Pow-R-Wash™ PR
Regular-strength contact cleaner safe for use on plastics

- Safe on plastics
- Flammable
- Dielectric breakdown of 44 kV
- Dries fast
- Leaves no residue

ES1605 10 oz / 283 g aerosol

Product Selection Guide				Features				Benefits and Applications		
Cleaner Degreasers	Plastic Safe		Nonflammable	Cleaning Strength		No Ozone Depleting Chemicals	Dries Fast	For Use On Live Circuits	Dielectric Breakdown	Lubricates
Pow-R-Wash® Delta	✓	✓	X	✓	✓		30kV			
Pow-R-Wash® Cable Cleaner	✓		X	✓			62kV			
Pow-R-Wash® VZ		✓	R	✓	✓	✓	15kV			
Pow-R-Wash® PR	✓		R	✓	✓		44kV			
Tune-O-Wash	✓		R	✓	✓		23kV			
DPL® Deep Penetrating Lubricant	✓		R	✓	NA	✓*	30kV	✓		
Pow-R-Wash® CZ	✓	✓	R	✓	✓	✓	31kV			
R – Regular Strength X – Extra Strength * For lubrication only										



Pow-R-Wash™ CZ

Non-ozone depleting, nonflammable contact cleaner safe for use on powered-up contacts and surrounding plastics

- Safe on plastics
- Nonflammable
- Dielectric strength of 31 kV
- Evaporates quickly without leaving residue
- Dries fast
- Leaves no residue

ES7300 12 oz / 340 g aerosol

Pow-R-Wash™ VZ

Economical non-ozone depleting, nonflammable contact cleaner safe for use on live circuits

- Nonflammable
- Dielectric breakdown of 15 kV
- Noncorrosive
- Evaporates quickly without leaving residue
- Test on plastics
- Ideal AK225 replacement

ES6300 12 oz / 340 g aerosol

ES6301 1 gal / 3.7 L liquid

Pow-R-Wash™ Cable Cleaner

Extra-strength, plastic safe cable and contact cleaner with a moderate evaporation time

- Safe on plastics
- Flammable
- Dielectric breakdown of 63 kV
- Leaves no residue

ES2425 13.5 oz / 385 g aerosol



Tun-O-Wash® Cleaner

Universal fast drying cleaner for electro-mechanical and electronic tuners

- Safe on plastics
- Flammable
- Dries fast
- Leaves no residue
- Cleans hard-to-reach areas

ES2400 12.5 oz / 354 g aerosol

DPL® Deep Penetrating Lubricant

Deep penetrating lubricant to displace moisture and inhibit corrosion

- Restores, rejuvenates, protects and preserves contacts
- Foaming spray penetrates deeply to remove moisture and condensation
- Loosens, cleans, lubricates and protects frozen or corroded parts
- Dielectric strength of 30 kV
- Contains no chlorinated solvents or silicone
- Non-corrosive and nonconductive
- Safe on metals and plastics
- NSF Registered — Nonfood Compounds/Code H2

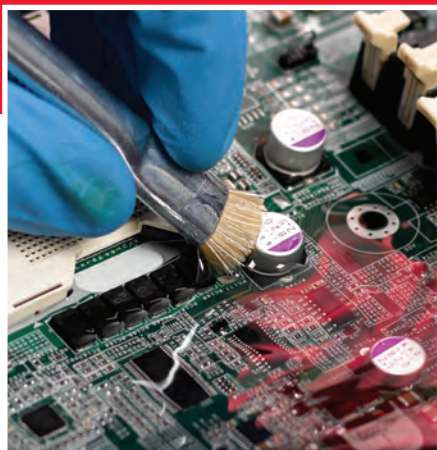


ES1626 11 oz / 322 g aerosol



Flux removal is critical to insure reliable circuitry. Not only unsightly, flux residue can promote short circuits and corrosion, degrading or destroying the printed circuit board.

Flux-Off® Flux Removers are specially formulated to remove all types of lead-free, rosin (types R, RA and RMA), no-clean, water soluble and synthetic flux.



Flux-Off® Delta

Extra strength, nonflammable solvent that removes heavy and encrusted flux deposits

- Nonflammable
- Best AK225 replacement chemistry
- Fast drying
- Contains no ozone depleting compounds, low VOC's

DEL1692	12 oz / 340 g aerosol
DEL892B	6 oz / 141 g BrushClean™ System
DEL192	1 gal / 3.7 L liquid
DEL592	5 gal / 18.9 L liquid
DEL5592	53 gal / 200 L liquid



DEL892B



VW595

VW195



Flux-Off® Tri-V™

Extra strength, nonflammable flux remover for replacing n-propyl bromide

- Nonflammable
- Can be used on energized equipment
- Fast drying
- Does not contain n-propyl bromide, trichloroethylene, or perchloroethylene

VW195	1 gal / 3.7 L liquid
VW595	5 gal / 18.9 L liquid
VW5595	53 gal / 200 L liquid

Product Selection Guide

Product Selection Guide	Primary Flux Residue Cleaned								Features								Cleaning Methods																
	Rosin Based*		No-Clean SA-Synthetic		Water Soluble		Removes White Residue		Plastic Safe		Nonflammable		No Ozone Depleting Chemicals		Dries Fast		Aerosol Spray		BrushClean™ System		Hand Cleaning		Vapor Degreasing		Ultrasonics		Immersion		Benchtop Spray System		Rinsing Recommended		
Flux-Off® Tri-V	1	1	NR	✓		✓	✓	✓			✓	✓	✓	✓	✓	✓																Strongest Cleaner	
Flux-Off® Delta	1	1	NR	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																
Flux-Off® Heavy Duty	1	1	2	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																
Flux-Off® VZ	1	2	NR			✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓																
Flux-Off® Complete	1	1	NR				✓	✓	✓	✓	✓		✓		✓	✓					✓	✓											
Flux-Off® Lead-Free	1	2	2				✓	✓	✓	✓	✓	✓	✓			✓	✓					✓	✓										
Flux-Off® No Clean Plus	1	1	2	✓			✓	✓	✓	✓	✓	✓	✓				✓	✓				✓	✓										
Flux-Off® Rosin	1	2	2		✓		✓	✓	✓	✓	✓	✓	✓				✓	✓				✓	✓										
Flux-Off® Water Soluble	1	NR	1		✓		✓	✓	✓	✓	✓		✓				✓					✓	✓										
Flux-Off® Aqueous	1	2	1	✓	✓	✓	✓									✓	✓	✓	✓			✓	✓										
Flux-Off® CZ	1	2	NR		✓	✓	✓	✓	✓	✓	✓	✓	✓																				Most Plastic-Safe
1 – Excellent 2 – Good NR – Not Recommended *R, RMA, RA, Rosin-based No-Clean																																	

Flux-Off® VZ

Economical, non-ozone depleting, nonflammable flux remover

- Nonflammable
- Cleans R, RMA, RA, and no-clean flux
- Low odor
- Dries fast
- Leaves no residue
- Test on plastics

ES6200 12 oz / 340 g aerosol
ES6201 1 gal / 3.7 L liquid
ES6255 53 gal / 200 L liquid

Flux-Off® CZ

Non-ozone depleting, nonflammable flux remover safe for use on plastics

- Safe on plastics
- Nonflammable
- Cleans R, RMA, RA, and no-clean flux
- Dries fast
- Leaves no residue

ES7200 12 oz / 340 g aerosol
ES7208B 5 oz / 141 g BrushClean™ System

Flux-Off® Complete

Powerful, economical flux remover for cleaning no-clean flux

- Cleans R, RMA, RA, and no-clean flux
- Dries fast
- Leaves no residue
- Flammable

ES1698 12 oz / 340 g aerosol
ES198 1 gal / 3.7 L liquid
ES598 5 gal / 18.9 L liquid
ES5598 53 gal / 200 L liquid



ES6200

ES7200

ES7208B



ES198

ES1698



The BrushClean™ System

Gentle scrubbing action of a brush combined with high performance flux removers



BrushClean™ System for difficult fluxes

The BrushClean™ System

This system increases cleaning efficiency in two ways – minimizing solvent usage by applying solvent only where you need it, and maximizing cleaning with the addition of mechanical scrubbing action.

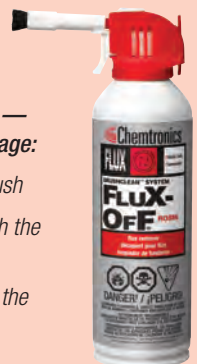
- Powerful solvents with scrubbing action of a brush
- Brush precisely applies solvent
- For critical deflusing, use Controlwipe™ (C910) between brush and board to absorb dissolved flux residues
- Solvent flow flushes brush clean
- New brush supplied with every can

Three powerful tools — one convenient package:

Spot clean with the brush

Flush under SMD's with the extension tube

Clean large areas with the spray nozzle



ES1697

ES897B

ES1631

Flux-Off® Lead-Free

Powerful flux remover for high temperature, lead-free flux removal

- Engineered for removing high temperature, lead-free flux
- Can also be used to remove tin/lead fluxes
- Flammable
- Evaporates quickly without leaving residue

ES1697	12 oz / 340 g aerosol
ES897B	6 oz / 170 g BrushClean™ System
ES197	1 gal / 3.7 L liquid
ES5597	55 gal / 208 L liquid

Flux-Off® Heavy-Duty

Heavy-duty flux remover for removing encrusted no-clean and rosin flux

- Nonflammable
- Dries fast
- Leaves no residue
- Test on plastics

ES1631	12 oz / 340 g aerosol
ES131	1 gal / 3.7 L liquid



ES135

ES1035

Flux-Off® Rosin

Plastic safe flux remover for cleaning all rosin and rosin-based no-clean flux

- Safe on plastics
- Flammable
- Evaporates quickly
- Leaves no residue

ES1035	10 oz / 283 g aerosol
ES1035B	10 oz / 283 g BrushClean™ System
ES835B	5 oz / 141 g BrushClean™ System
ES135	1 gal / 3.7 L liquid
ES535	5 gal / 18.5 L liquid
ES5535	55 gal / 208 L liquid

Flux Removers



Flux-Off® Aqueous

Aqueous flux remover for use in ultrasonics and in-line cleaning systems

- Water-based saponifier for removing all flux types
- Safe on plastics
- Nonflammable
- Concentrated – dilute to adjust cleaning strength
- Requires a water rinse

ES132 1 gal / 3.7 L liquid



ES896B

ES1696

Flux-Off® No Clean Plus

Powerful economical flux remover for cleaning no-clean flux

- Flammable
- Dries fast
- Leaves no residue
- Test on plastics

ES1696 12 oz / 340 g aerosol

ES896B 6 oz / 170 g BrushClean™ System

ES196 1 gal / 3.7 L liquid

ES596 5 gal / 18.5 L liquid

ES5596 55 gal / 208 L liquid



ES1530

ES130

Flux-Off® Water Soluble

Plastic safe flux remover for cleaning water-soluble flux

- Safe on plastics
- Flammable
- Dries fast
- Leaves no residue

ES1530 13.5 oz / 383 g aerosol

ES130 1 gal / 3.7 L liquid

IPA - Isopropyl Alcohol



Conveniently packaged and easy to use 99.8% technical grade isopropyl alcohol

- Safe on plastics
- Flammable
- Dries fast
- Leaves no residue
- Cleans hard-to-reach areas

ES820L 8 fl oz / 236 ml liquid

ES105 1 gal / 3.7 L liquid

ES505 5 gal / 18.9 L liquid

ES5505 53 gal / 200 L liquid



ES820L



ES105



Chemtronics® Dusters are microscopically clean, oil and moisture free sources of "canned air" developed for applications where safe, ultra-pure cleaning is required. Compact and portable, Chemtronics dusters deliver powerful jet action to instantly remove particles from even the most inaccessible areas. Economize solvent usage by removing layers of dry particulate allowing the solvent to work immediately on encrusted soils. Also accelerate surface drying when using slow evaporating cleaners.



Ultrajet® All-Way

Invertable duster with the BIGGEST blast to clean anything fast

All-Way Spray can be sprayed into hard to reach places without the risk of dispensing a liquid spray that can freeze or damage sensitive surfaces.

- Nonflammable
- Highest powered cleaning strength
- Zero VOC
- Filtered to 0.2 microns
- 100% ultra-pure HFC-134a — leaves no residue
- Safe on plastics

ES1620 8 oz / 226 g aerosol

Ultrajet®

Duster with the BIGGEST blast to clean anything fast

- Nonflammable
- Highest powered cleaning strength
- Zero VOC
- Filtered to 0.2 microns
- 100% ultra-pure HFC-134a — leaves no residue
- Safe on plastics

ES1020 10 oz / 283 g aerosol

Ultrajet® 70

Powerful, economical duster with a BIGGER blast than competitive dusters

- Nonflammable
- High powered cleaning strength
- Bigger Blast than competitive dusters
- Zero VOC
- Filtered to 0.2 microns
- 100% ultra-pure HFC-134a — leaves no residue
- Safe on plastics

ES1015 10 oz / 283 g aerosol



ES1620

ES1020

ES1015

Product Selection Guide

	Blasting Power	Nonflammable	All-Way Spray	Contents	Force Generated*	Internal Pressure	GWP**	Use On Live Circuits
Ultrajet®	XX Strength	✓	No	HFC-134a	1.51 N	71 PSIG	1300	Yes
Ultrajet® All-Way	XX Strength	✓	Yes	HFC-134a	1.78 N	71 PSIG	1300	Yes
Ultrajet® 70	X Strength	✓	No	HFC-134a	1.35 N	71 PSIG	1300	Yes
Duster	Regular Strength	✓	No	HFC-134a	0.94 N	71 PSIG	1300	Yes
152A Blast™	X Strength		No	HFC-152a	1.38 N	63 PSIG	140	No
Typhoon Blast™ 70	X Strength	✓	No	HFO-1234ze	0.93 N	47 PSIG	6	Yes

* Force generated measured without extension tubes on Shimpo force gauge.

** Global warming potential (GWP) is calculated based on a 100 year time horizon. Carbon dioxide has a GWP of 1.

Duster

Economical, regular strength duster

- Nonflammable
- Regular cleaning strength
- Zero VOC
- Filtered to 0.2 microns
- 100% ultra-pure HFC-134a
- Leaves no residue
- Safe on plastics

ES1017 10 oz / 283 g aerosol
ES1217 8 oz / 226 g aerosol
ES1617 12 oz / 340 g aerosol



ES1617

152A Blast™

Economical, extra-strength general purpose duster

- Safe on plastics
- High powered cleaning strength
- Flammable
- Zero VOC
- 100% pure HFC-152a
- 1/10th Global Warming Potential of HFC-134a

Applications:

- Cleaning dust and particles from de-energized electronics
- Maintenance and repair of de-energized computers, postage meters, and servers

ES1029 10 oz / 283 g aerosol



ES1029

Typhoon Blast™ 70 Duster

Powerful and economical, ultra-low GWP duster with the BIGGER blast

- Ultra-Low GWP
- High powered cleaning strength
- Nonflammable
- Zero VOC
- Filtered to 0.2 microns
- 100% HFO-1234ze
- Leaves no residue
- Safe on plastics

ES1025 10 oz. / 383 g aerosol



ES1025

Ultrajet® Duster System

Reusable duster system with a precision surgical-grade chrome trigger valve

- Nonflammable
- Conductive trigger valve prevents static build-up
- Zero VOC
- Filtered to 0.2 microns
- 100% ultra-pure HFC-134a — leaves no residue
- Safe on plastics

Applications:

- Ground valve for cleaning sensitive electronics
- Cleaning inside electrical cabinets

ES1020K 10 oz / 283 g aerosol kit
 Contents: ES1020R and ES710V

ES1020R 10 oz / 283 g aerosol refill

ES710V Chrome Trigger Valve



ES1020K

Chrome trigger can be grounded for static sensitive applications, and fits refill can (ES1020R).



Chemtronics® Freeze Sprays are exceptionally pure, nonflammable and provide instantaneous freezing action while leaving no residue. Conveniently packaged and designed for either pinpoint or full board application, these non-reactive circuit refrigerants vaporize instantly while cooling targeted areas.



ES1050

ES1052

ES1055

Freeze-It®

High-performance, pinpoint-accurate freeze spray for isolating individual components on PC boards

- Pinpoint spray isolates individual components without freezing surrounding areas
- Safe on plastics
- Nonflammable
- Filtered to 0.2 microns

ES1050 10 oz / 283 g aerosol

ES1550 15 oz / 425 g aerosol

Freeze-It® Antistat

High-performance, pinpoint-accurate freeze spray that safely cools individual static-sensitive components



- Pinpoint spray isolates individual components without freezing surrounding areas
- Ideal for use on static sensitive components
- Non-frosting
- Safe on plastics
- Nonflammable
- Filtered to 0.2 microns

ES1051 10 oz / 283 g aerosol

ES1551 15 oz / 425 g aerosol

Freeze Spray

Economical, general purpose freeze spray with wide spray for cooling entire PC boards

- Wide spray for cooling entire boards
- Safe on plastics
- Nonflammable
- Filtered to 0.2 microns

ES1052 10 oz / 283 g aerosol

Arctic Blast™

Ultra-low GWP freeze spray with pin-point accuracy for isolating individual components

- Ultra-low Global Warming Potential
- Pinpoint spray isolates individual components without freezing surrounding areas
- Safe on plastics
- Nonflammable
- Filtered to 0.2 microns

ES1054 10 oz / 283 g aerosol

Arctic Blast™ Antistat

Ultra-low GWP antistatic freeze spray with pin-point accuracy for isolating individual components



- Ultra-low Global Warming Potential
- Pinpoint spray isolates individual components without freezing surrounding areas
- Ideal for use on static sensitive components
- Non-frosting
- Safe on plastics
- Nonflammable
- Filtered to 0.2 microns

ES1055 10 oz / 283 g aerosol

Arctic Storm™

Ultra-low GWP freeze spray with wide spray for cooling entire PC boards

- Ultra-low Global Warming Potential
- Wide spray for cooling an entire board
- Safe on plastics
- Nonflammable
- Filtered to 0.2 microns

ES1056 10 oz / 283 g aerosol

Product Selection Guide

Product	Application	Global Warming Potential*	Volatile Organic Compound**	Frost Formation	Cooling Speed	Cooling Temperature
Arctic Blast™	Pinpoint	6	0%	Yes	Fast	-49°F/-45°C
Arctic Blast™ Antistat	Pinpoint	6	<1%	No	Fast	-49°F/-45°C
Arctic Storm™	Wide Area	6	0%	Yes	Very Fast	-49°F/-45°C
Freeze-It®	Pinpoint	1300	0%	Yes	Fast	-60°F/-51°C
Freeze-It® Antistat	Pinpoint	1300	<1%	No	Fast	-60°F/-51°C
Freeze Spray	Wide Area	1300	0%	Yes	Very Fast	-60°F/-51°C

* Global warming potential (GWP) is calculated based on a 100 year time horizon. Carbon dioxide has a GWP of 1.



Chemtronics Static Free™ products are engineered to protect electronic equipment and work spaces from static buildup while cleaning and reconditioning. These products provide everything required for a comprehensive surface treatment program as recommended by ANSI/ESDS 20.20.



Static Free™ Hand Guard™

Hand lotion formulated to protect against electrostatic discharge

- Special formulation minimizes potential for static damage
- Penetrates deeply to moisten and refresh dry, chapped or chemically irritated skin
- Nongreasy formula contains Aloe Vera and Vitamin E
- Contains no lanolin, silicone or mineral oil that could inhibit solderability of printed circuits or components

C805 8 fl oz / 236 ml liquid

Static Free™ Plast-N-Glas®

Foaming, non-streaking static dissipative cleaner for transparent surfaces

- Controls static, cleans and polishes in one application
- Effectively removes handling oils, finger soils and nicotine stains
- Prevents attraction of dust and dirt
- Compatible with plastics, glass and stainless steel
- Foaming spray won't run or drip; ideal for optical surfaces
- Not for use on anti-glare coatings or mesh screens

Applications:

- Cleaning computer monitors and housings
- Removing handling soils from precision glassware
- Maintaining cleanliness of observation windows on production equipment

ES1668 14 oz / 397 g aerosol

Static Free™ Mat and Benchtop Reconditioner

Cleans and rejuvenates ESD-safe surfaces

- Cleans and rejuvenates burned or dead spots on ESD mats
- Excellent for extending life of ESD mats
- Will not dry mat surfaces with repeated use
- Long-lasting dissipative protection; up to 30 days
- Effective in relative humidity below 15%
- Chloride and amine free formulation
- Noncorrosive
- Meets static decay criteria of MIL-B-891705C

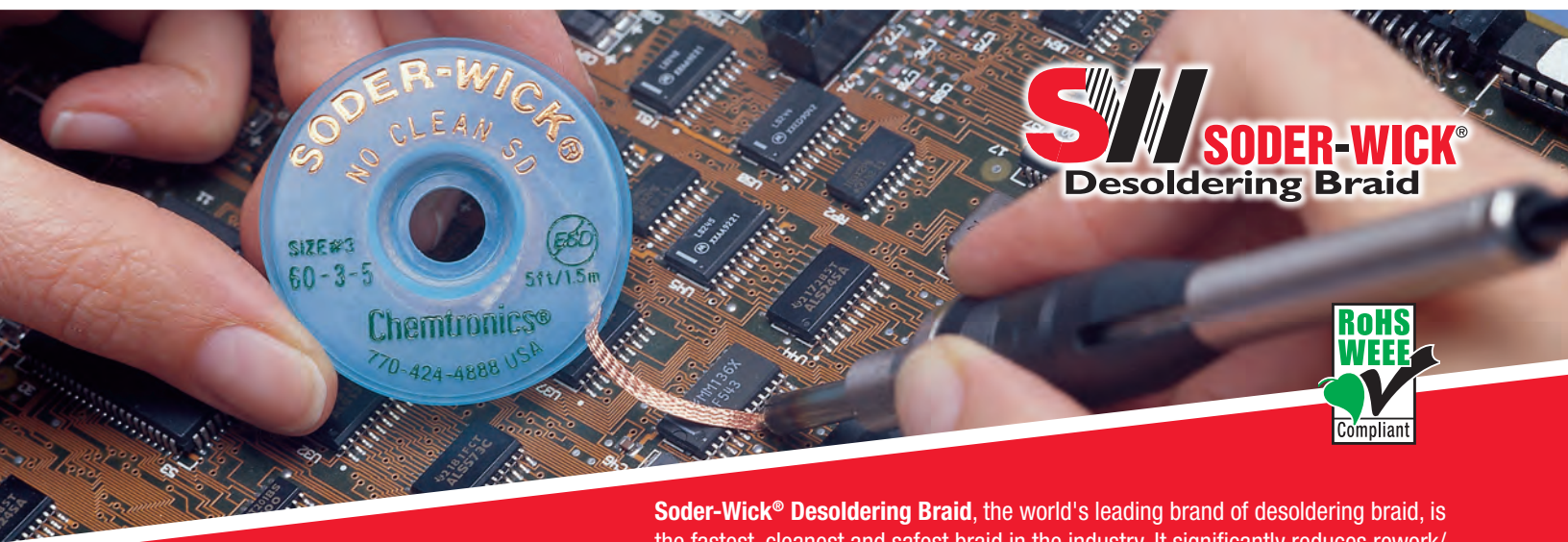
ES1664T 16 fl oz / 472 mL Trigger Spray



C805

ES1668

ES1664T



Soder-Wick® Desoldering Braid, the world's leading brand of desoldering braid, is the fastest, cleanest and safest braid in the industry. It significantly reduces rework/repair time and minimizes the risk of heat damage to the board.

All Soder-Wick meet these specs:

- MIL-F-14256 F type R flux
- NASA-STD-8739.3 Soldered Electrical Connections
- DOD-STD-883E, Method 2022
- ANSI/IPC J STD-004, Type ROL0

Solder-Wick No-Clean and Lead Free wick meet these specs:

- Meets MIL-STD-883B, Bellcore TR-NWT-000078, ANSI/IPC J SF-818
- Meets parameters tested by the Singapore Institute of Standards and Industrial Research (SISIR) for Solderability
- ANSI/IPC J STD-004, Type ROL0

Product Selection Guide

Product	Size	Color	5' 1.5m	10' 3.0m	25' 7.5m	100' 30.5m	500' 152.5m	5' / 1.5m VacuPak™
Soder-Wick® Rosin Fastest wicking action with rosin flux coated desoldering braid	1 .030"/0.8mm	White	80-1-5	80-1-10	50-1-25			SW18015
	2 .060"/1.5mm	Yellow	80-2-5	80-2-10	50-2-25	50-2-100	50-2-500	SW18025
	3 .080"/2.0mm	Green	80-3-5	80-3-10	50-3-25	50-3-100		SW18035
	4 .110"/2.8mm	Blue	80-4-5	80-4-10	50-4-25	50-4-100		SW18045
	5 .145"/3.7mm	Brown	80-5-5	80-5-10	50-5-25			SW18055
	6 .210"/5.3mm	Red	80-6-5		50-6-25			
Soder-Wick® No Clean Cleanest, leaving behind no ionic residue, with no clean flux coated desoldering braid	1 .030"/0.8mm	White	60-1-5	60-1-10				SW16015
	2 .060"/1.5mm	Yellow	60-2-5	60-2-10				SW16025
	3 .080"/2.0mm	Green	60-3-5	60-3-10				SW16035
	4 .110"/2.8mm	Blue	60-4-5	60-4-10				SW16045
	5 .145"/3.7mm	Brown	60-5-5	60-5-10				SW16055
	6 .210"/5.3mm	Red	60-6-5					
Soder-Wick® Lead-Free Safest on thermally sensitive components, with this specially engineered no clean flux coated desoldering braid	1 .030"/0.8mm	White	40-1-5					
	2 .060"/1.5mm	Yellow	40-2-5	40-2-10				SW14025
	3 .080"/2.0mm	Green	40-3-5	40-3-10				SW14035
	4 .110"/2.8mm	Blue	40-4-5	40-4-10				SW14045

*Offered in static dissipative (SD) bobbins:

- DOD Standard 1686C and MIL-HDBK-263B
- Mil-Std-2000A
- Mil-B-81705C Static Decay Rate Provision



VacuPak™ Resealable Packaging

Guarantees Soder-Wick is as fast as the day it was made. Cans are vacuum sealed with nitrogen-purge to eliminate moisture, which causes oxidation and hurts performance. 10 bobbins/can.

5' and 10' packaged 25 bobbins/sleeve, all others 1 spool/sleeve.



Product Selection Guide

Product	Size	Color	10' 3.0m	25' 7.5m
Soder-Wick® Unfluxed Unfluxed desoldering braid which can be coated with any flux type	2 .060"/1.5mm	Yellow	75-2-10	70-2-25
	3 .080"/2.0mm	Green	75-3-10	70-3-25
	4 .110"/2.8mm	Blue	75-4-10	

Desoldering Braid Product Application Guide

#1 White/Gray .<030" (0.8mm)	#2 Yellow .<060" (1.5mm)	#3 Green .<080" (2.0mm)
#4 Blue .<110" (2.8mm)	#5 Brown .<145" (3.7mm)	#6 Red .<210" (5.3mm)

Wick shown actual size

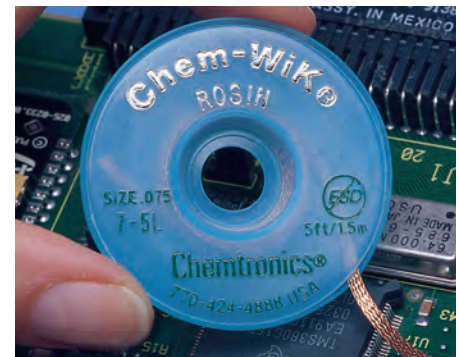
Size	Color	Application
1 .030"/0.8mm	White / Gray	SMD, Micro-Circuits
2 .060"/1.5mm	Yellow	Small Pads, SMDs
3 .080"/2.0mm	Green	Medium Pads
4 .110"/2.8mm	Blue	Large Pads
5 .145"/3.7mm	Brown	Terminals
6 .210"/5.3mm	Red	Large Lugs

Chem-Wik® Desoldering Braid

Chem-Wik® Desoldering Braid ensures fast and safe desoldering with ultra-pure, oxygen free copper braid that quickly and completely removes solder from circuit boards and components. Its fast wicking action protects components from harmful heat damage. PermaPak™ Barrier Packaging is nitrogen-purged, which ensures braid freshness and speed by sealing out harmful effects of the environment and protecting against oxidation.

Chem-Wik® Desoldering Braid meets or exceeds industry performance standards:

- MIL-F-14256F Type R
- NASA STD-8739.3 Soldered Electrical Connections
- ANSI/IPC J STD-004, Type ROL0
- DOD-STD-883E, Method 2022



Product Selection Guide

Product	Size	Color	5'*	25'	50'	100'	500'
			1.5m	7.5m	15.0m	30.5m	152.5m
Chem-Wik® Rosin Fast wicking action with rosin flux coated desoldering braid	1 .030"/0.8mm	Gray	2-5L	2-25L	2-50L		
	2 .050"/1.3mm	Yellow	5-5L	5-25L	5-50L	5-100L	5-500L
	3 .075"/1.9mm	Green	7-5L	7-25L	7-50L	7-100L	7-500L
	4 .100"/2.5mm	Blue	10-5L	10-25L	10-50L	10-100L	10-500L



PermaPak™ Barrier Packaging
5' packaged 25 bobbins/sleeve, all others 1 spool/sleeve.



***Offered in static dissipative (SD) bobbins:**

- Reduces the risk of damage associated with static electricity
- DOD Standard 1686C and MIL-HDBK-263B
- Mil-Std-2000A
- Mil-B-81705C Static Decay Rate Provision



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

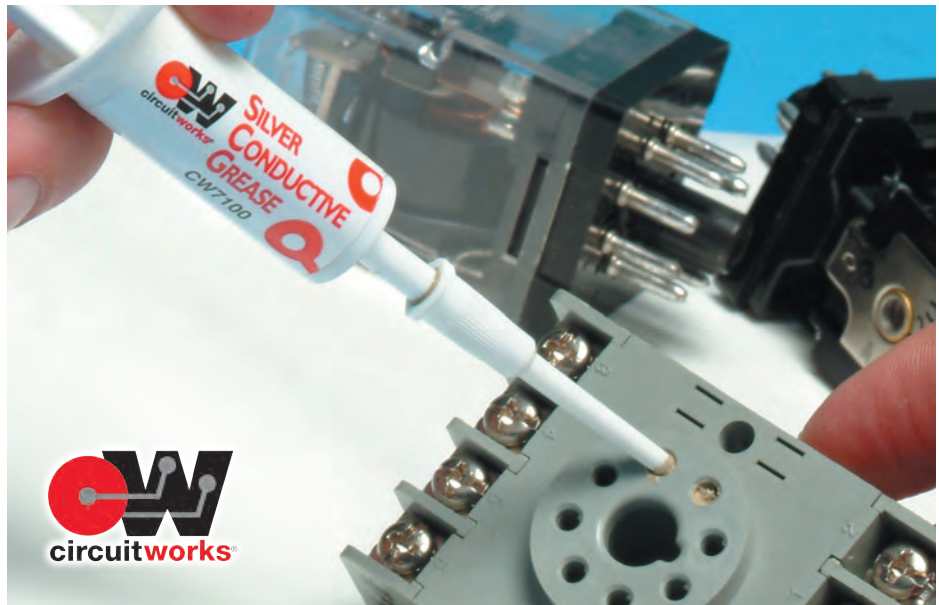
CircuitWorks®

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.



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 -99.4°F/-73°C to 392°F/200°C
- 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 -5°F/-15°C to 392°F/200°C
- 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 -40°F/-40°C to 342°F/172°C
- 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



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

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



CW8200



CW8300



CW8700

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

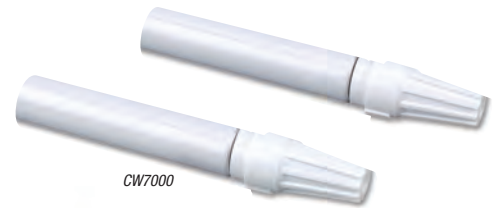
CW8500 3.5 g / 0.12 oz Syringe

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



CW7000

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

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



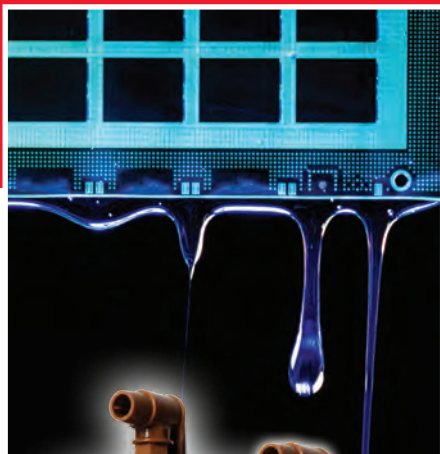
Fiber-Wash™ NF Precision Cleaner Pen

Nonflammable, fast drying fiber optic cleaner

FW2170 10 g / 0.4 oz pen



Konform® Conformal Coatings are used to protect printed circuit boards, components and flex circuitry. These coatings provide excellent electrical insulation and withstand hot and cold operating environments, as well as heat generated by electronic circuitry. Formulated to protect components and circuits in the most demanding of environments, all Konform® conformal coatings contain a UV indicator for easy quality assurance (except Konform® LED). These tough, transparent coatings will not chip or crack, thereby providing excellent protection. All are convenient and ready to use.



Konform® SR

Silicone coating for maximum flexibility and protection from extreme temperatures and vibration damage

- Silicone coating working temperature from -85°F/-64°C to 390°F/200°C
- High dielectric strength of 1100 volts/mil
- Easily removed with Electro-Wash® Two Step, Electro-Wash® NX0, or CircuitWorks® Conformal Coating Remover Pen
- Meets MIL-I-46058C, Type SR
- Compliant to IPC-CC-830A
- Engineered for applications where flexibility and high temperature resistance are required
- Contains UV Tracer for easy quality control
- UL recognized (standard viscosity only)

CTSR-12	10 oz / 283 g aerosol
CTSR-P	16 fl oz / 473 ml liquid
CTSR1	1 gal / 3.7 L liquid
CTSR5	5 gal / 19 L liquid



High Viscosity

CTSR-HV1	1 gal / 3.7 L liquid
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Konform® AR

Acrylic coating for effective insulation against high voltage arcing and shorts

- Acrylic coating working temperature from -75°F/-59°C to 270°F/132°C
- High dielectric strength of 8300 volts/mil
- Meets MIL-I-46058C, Type AR
- Compliant to IPC-CC-830A
- Designed to provide effective insulation against electrical shorts and harsh environments
- Provides excellent acid resistance
- Easily repairable
- Contains UV Tracer for easy quality control
- UL recognized

CTAR-12	11.5 oz / 326 g aerosol
CTAR-P	16 fl oz / 473 ml liquid
CTAR1	1 gal / 3.7 L liquid
CTAR5	5 gal / 19 L liquid

Product Selection Guide

	Resistance						Underwriters Laboratories				Coating Characteristics				Cure Profile	
	Temperature Resistance	Abrasion Resistance	Acid Resistance	Solvent Resistance	Humidity Resistance	Water Submersible Per UL	UL Recognized	UV Traceable	System	Flexibility	Solderability	Repairability	Dielectric Breakdown	Working Temperature	Tack Free Time	Full Cure Time
Konform® SR	1	4	2	2	1	✓	✓	✓	Solvent	1	4	3	1100	-85F to 390° (-65°C to 200°)	15 min.	24 hrs. @RT
Konform® SR High Viscosity	1	4	2	2	1	✓		✓	Solvent	1	4	3	1100	-85F to 390° (-65°C to 200°)	15 min.	24 hrs. @RT
Konform® AR	2	1	1	3	1		✓	✓	Solvent	4	3	4	8300	-75F to 270° (-59°C to 132°)	30 min.	24 hrs. @RT
Konform® LED	1	4	2	2	1				Solvent	1	4	3	1100	-85F to 390° (-65°C to 200°)	15 min.	24 hrs. @RT
Konform® Ultra	2	2	1	3	1			✓	Solvent	4	3	3	8300	-75F to 270° (-59°C to 132°)	10 min.	24 hrs. @RT
Konform® UR-A	3	1	1	1	4			✓	Water-based	3	3	4	3340	-85F to 257° (-65°C to 125°)	1 hr.	24 hrs. @RT
Konform® HR	3	1	2	2	4			✓	Water-based	4	3	4	7100	-31F to 212° (-35°C to 100°)	1 hr.	24 hrs. @RTh
1 – Outstanding 2 – Excellent 3 – Good 4 – Fair NA – Not Available																

Konform® LED

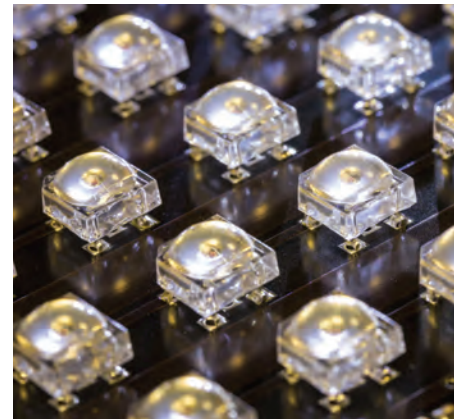
Silicone conformal coating designed for light emitting diode (LED) applications

- Silicone coating transparent to visible wavelengths, will not block or change light intensity or wavelength
- Extends component life by protecting against adverse environments
- Good insulation properties help with circuit insulation characteristics, excellent flexibility minimizes thermal stress
- Resists moisture, salt, fungus, corrosive vapors, and severe environments
- Engineered to withstand heat generated by PCB as well as climatic temperature extremes
- Compliant with IPC-CC-830A, MIL-I-46058C (without UV) and RoHS

CTLED-P 16 fl oz / 473 ml liquid

CTLED1 1 gal / 3.7 L liquid

CTLED5 5 gal / 18.5 L liquid



Konform® LED is specially formulated to be optically clear.



CTUFD-12

CTUFD1



CTURA1

CTURA5



CTHR1

CTHR5

Konform® Ultra

Ultra-fast drying acrylic coating for superior insulation against high voltage arcing

- Extremely fast drying; allows quick throughput, minimizes processing time
- Acrylic coating operating temperature from -75°F/-59°C to 270°F/132°C
- High dielectric breakdown of 8300 volts/mil
- Meets MIL-I-46058C, Type AR
- Compliant to IPC-CC-830B Class B
- Designed to provide effective insulation against electrical shorts and harsh environments
- Provides excellent acid resistance
- Easily repairable
- Contains UV Tracer for easy quality control

CTUFD-12 11.5 oz / 326 g aerosol

CTUFD1 1 gal / 3.7 L liquid

CTUFD5 5 gal / 18.5 L liquid

Konform® UR-A

Water-based urethane conformal coating formulated for superior durability and moisture protection

- Water-based coating minimizes odor and VOC exposure
- Provides outstanding barrier and moisture protection
- Urethane coating offers outstanding abrasion and solvent resistance
- Coating operating temperature from -85°F/-65°C to 257°F/125°C
- High dielectric breakdown of 3340 volts/mil
- Compliant to IPC-CC-830B Class B
- Provides excellent acid resistance
- Contains UV Tracer for easy quality control

CTURA1 1 gal / 3.7 L liquid

CTURA5 5 gal / 18.5 L liquid

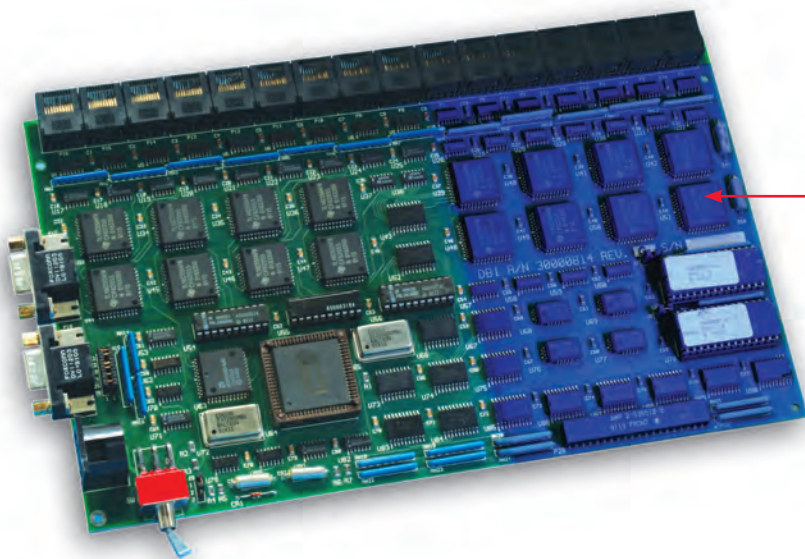
Konform® HR

Water-based conformal coating for superior dielectric and abrasion resistance

- Water-based coating minimizes VOC exposure
- Unique acrylic/urethane based coating; provides the flexibility and toughness of urethane, with the superior insulation protection of an acrylic
- Coating operating temperature from -31°F/-35°C to 212°F/100°C
- High dielectric breakdown of 7100 volts/mil
- Compliant to IPC-CC-830B Class B
- Provides excellent acid resistance
- Contains UV Tracer for easy quality control

CTHR1 1 gal / 3.7 L liquid

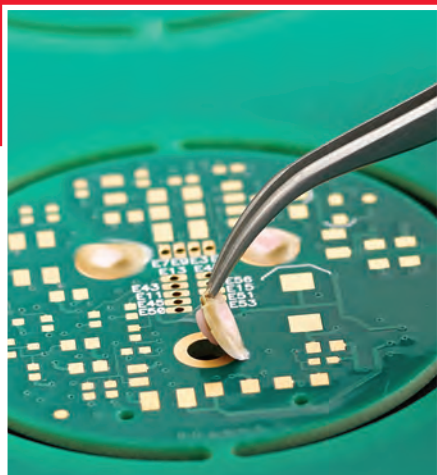
CTHR5 5 gal / 18.5 L liquid



All Konform® conformal coatings contain a UV indicator for improved quality assurance (except CTLED).



Chemask® Temporary Solder Masks protect PC boards, plated thru-holes, contacts, pins, posts, terminals and gold fingers during reflow and wave soldering. They provide short-term high-temperature protection from molten solder to a minimum of 515°F/268°C. All products are nonflammable, non-contaminating and will not leave ionic or corrosive residue. Use as a protective mask during conformal coating process.



Chemask® — Peelable

Fast curing, peelable temporary solder masking agent

- Dries tack-free in 15 minutes
- Easy to use — just peel off dried Chemask® masking agent
- Latex material is compatible with all flux systems and stable with cleaning solvents

CM8 8 fl oz / 236 ml liquid squeeze bottle
CM1 1 gal / 3.7 L liquid

Chemask® NA — Non-Ammoniated

High temperature, peelable, temporary mask safe for use on sensitive metals

- Will not affect gold, copper, nickel, silver and OSP finishes
- For lead-free or tin/lead processes
- Stable to 550°F (288°C)
- Phthalate-free, low toxicity and environmentally safe
- Compatible with rosin, no-clean and water soluble flux types
- Dries tack free in 15 minutes
- Can be placed directly into pre-heat oven without waiting
- Removes easily and leaves no residue
- Non-contaminating, non-staining and noncorrosive

CNA8 8 fl oz / 236 ml liquid squeeze bottle
CNA1 1 gal / 3.7 L liquid

Chemask® LF — Lead-Free

High temperature, peelable temporary mask ideal for lead-free applications

- Formulated for use with lead-free applications
- Can also be used with tin/lead solders
- Usable within five minutes of application with preheat cycles
- Provides short-term high temperature protection up to 550°F (288°C)

CLF8 8 fl oz / 236 ml liquid squeeze bottle
CLF1 1 gal / 3.7 L liquid



Product Selection Guide

	Product Characteristics					Application Methods					Removal Methods
	Safe for Sensitive Metal Surfaces	Tack Free Time @ Room Temperature	Full Cure Time @ Room Temperature	Preheat Activated	Flux Resistance	Solvent Resistance	Automated Dispenser	Stencils	Screens	Peelable	
Chemask® Peelable	NR	15 min.	30 min.	NA	All types	All types	Yes	No	No	Yes	No
Chemask® NA Non-Ammoniated	Yes	15 min.	30 min.	Yes; can be placed directly into preheat	All types	All types	Yes	Yes	Yes	Yes	No
Chemask® LF Lead-Free	NR	15 min.	30 min.	Yes; 4 min. full cure	All types	All types	No	No	No	Yes	No
Chemask® HV High Viscosity	Yes	15 min.	30 min.	Yes; 4 min. full cure	All types	All types	No	No	No	Yes	No
Chemask® Aqua Water Soluble	No	30 min.	60 min.	NA	All types	Remove with water and water-based cleaners	Yes	Yes	Yes	No	Yes
Chemask® WF Water Filterable	No	30 min.	60 min.	NA	Not compatible with water-based flux	Remove with water and water-based cleaners	Yes	Yes	Yes	No	Yes
Chemask® W Water Soluble	No	30 min.	60 min.	NA	All types	Remove with alcohol, wkeytone, water and water-based cleaners	Yes	Yes	Yes	No	Yes*

NA – Not Available NR – Not Recommended *Open Loop System Only

Chemask® HV — High Viscosity

High viscosity, peelable temporary solder masking agent

- Usable within five minutes of application with preheat cycle
- More controlled application
- Thicker coating does not seep through thru-holes
- Latex material is compatible with all flux systems and stable with cleaning solvents

CHV8 8 fl oz / 236 ml liquid squeeze bottle



Chemask® Aqua

High temperature, water soluble, temporary mask safe for use on component-free areas

- Protects boards from molten solder to 515°F (268°C)
- Prolongs deionized water system life
- Low foaming
- Compatible with most flux types
- Leaves no corrosive residue
- Does not contain Methanol
- Non-contaminating

CMAQ8 8 fl oz / 236 ml liquid squeeze bottle

CMAQ1 1 gal / 3.7 L liquid



CMAQ8

Chemask® W — Water Soluble

Water soluble temporary solder masking agent

- Dissolves in water cleaning cycles
- Noncorrosive; safe for sensitive gold, silver and copper
- Can be used as a water soluble tacking compound

CW8 8 fl oz / 236 ml liquid squeeze bottle



Chemask® WF — Water Filterable

Low-foaming, water filterable temporary solder masking agent

- Easily removed in water cleaning cycles
- Does not coat filtration equipment
- Noncorrosive; safe for sensitive contacts
- Removed with inexpensive filters, increasing the life span of activated carbon/resin beds
- US Patent Number 6,207,265

Applications:

- Ideal for use with closed loop cleaning systems
- Increases productivity by reducing cleaning system maintenance
- Short-term high-temperature protection from molten solder to 515°F (268°C)

CWF8 8 fl oz / 236 ml liquid squeeze bottle

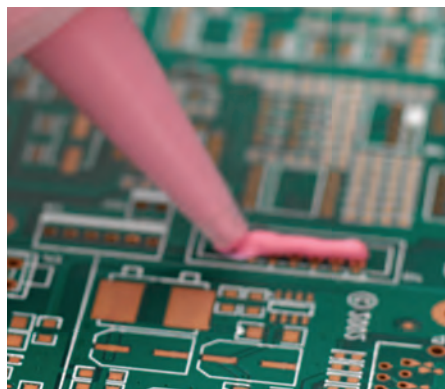
CWF1 1 gal / 3.7 L liquid



CWF8



CWF1





IPA Presaturated Wipes

General purpose presaturated wipe in a convenient dispenser

- Ultra pure mixture of IPA and deionized water
- Strong, will not tear, shred, unravel or lint
- Holds up to the most rigorous scrubbing
- SIP125P, SIP100P and SIP91P pull-up presaturated wipes are ideal for cleaning of semi-automatic printer stencils, and touch-up cleaning of automatic printer stencils
- IPA100B wipes are lint free and pre-cut — excellent for cleaning fine pitch stencils

SIP100P 100 pull-up presaturated wipes
70% IPA and 30% deionized water

SIP125P 125 pull-up presaturated wipes
70% IPA and 30% deionized water

SIP91P 100 pull-up presaturated wipes
91% IPA and 9% deionized water

IPA100B 100 c-fold presaturated wipes
70% IPA and 30% deionized water

Chempad™ Presaturated Wipe

General purpose, presaturated lint-free cleaning wipe

- Contains ultra pure blend of 91% IPA/9% deionized water
- Thick, non-abrasive, wiping pad
- Quickly removes dust, oils and contaminants

CP400 50 single pack presaturated wipes

Electro-Wash® MX Presaturated Wipe

Extra-strength plastic safe universal cleaner with moderate evaporation time

- Cleans all soil types — organic and ionic
- Moderate evaporation rate increases cleaning power
- Leaves no residue
- Presaturated wipe great for toolbox or travel

Applications:

- Ideal for cleaning fiber optics and fiber optic connectors, cables, hard-line coax cable, cable splices, PC boards, motors, tools and transformers, flooding compounds, control systems, screens and stencils

CP421 25 single pack presaturated wipes

Also available in an aerosol — ES1621. See page 5.

Screen Prep™ Presaturated Wipe

Convenient cleaning and static control for monitors



- Cleans and provides a static dissipative treatment
- Prevents airborne recontamination for up to seven days
- Safely removes dust, dirt, oil and nicotine
- Controls static-generated contamination
- Wet pad cleans and applies static protection
- Dry wiper polishes screen optically clear

CSP20 25 twin packs
#1 presaturated pad
#2 polishing wiper

Optic Prep™ Presaturated Wipe

Highest quality premoistened lens-grade tissue for cleaning optical surfaces

- Safely cleans and polishes optical surfaces, lenses, photographic equipment, fiber optic connectors and instruments
- Compatible with most plastics, glass and metals
- Mild cleaning solution, nonabrasive wipe
- Quickly removes dust, oils and contaminants connectors and instruments

CP410 50 single pack presaturated pads

Chemswab™ Presaturated Swab

Easy to use swab presaturated with alcohol

- Urethane foam swab (Foamtips™ #120) presaturated with ultra-pure IPA
- Evaporates quickly with no residue or contamination
- Nonabrasive
- Ideal for field service kits

CS25 25 presaturated swabs





- High absorbency
- Contamination control
- High-purity
- Little or no linting

Chemtronics® Dry Wipes are engineered and manufactured clean. They are designed for controlled environments, light industrial, benchtop, laboratory and high absorbency applications.

They are ideal for use with strong solvents and the full range of engineered Chemtronics® cleaners; Electro-Wash® cleaner degreasers, Static Free™ static control products and Flux-Off® flux removers.

Controlwipes™

Solvent resistant highly absorbent wipe

- Nonwoven, spunlaced polyester cellulose fabric
- General purpose lint-free wipe
- Strong, will not tear, shred, unravel or lint
- High absorbency and liquid retention
- Will not abrade surfaces
- Resistant to most solvents and dilute acids
- For applications requiring contamination control

Applications:

- Removing light surface contamination from CRT's and optical glass surfaces
- Cleaning and absorbing solvents from semi-critical work surfaces

C910 150 wipes 9" x 9" / 23 cm x 23 cm



Twilwipes™

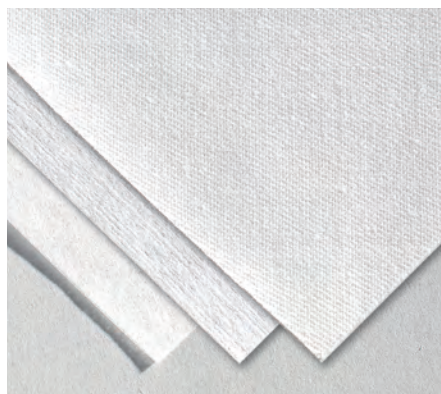
Highly absorbent wipe for abrasion-free cleaning and drying of sensitive surfaces, components and equipment

- Strong, textured 100% cotton
- Minimal linting
- Cleanroom Compatible Class 1000 / ISO Class 4
- Resistant to caustic solvents and temperatures up to 302°F/150°C

Applications:

- Cleaning applications involving high temperature
- Ideal for use with caustic solutions

C900 150 wipes 9" x 9" / 23 cm x 23 cm



Opticwipes™

Soft laboratory-grade cellulose tissue designed for use on optical and other sensitive surfaces

- 100% cellulose
- Highly absorbent; high wet strength
- Noncontaminating
- Solvent resistant
- Low in soluble extractable contamination and particle generation

Applications:

- Cleaning optical surfaces, photo processing, lab equipment and other precision instrumentation
- Ideal for cleaning optical lenses

C920 500 wipes 9" x 9" / 23 cm x 23 cm



Chemtronics® Swabs and Applicators are engineered for use in a variety of environments and applications. They are ideal for use with our cleaner degreasers, head cleaners, flux removers and other solvents for fast, precision cleaning. From the innovative no-lint Chamois Tips™ Swab to the general purpose Cottontips™ Swab, Chemtronics® has the right swab or applicator for your job.



Foamtips™

Highly absorbent precision cleaning swab with a wide variety of head sizes and shapes

- Precision cleaning swabs with 100 ppi polyurethane open cell foam head
- Purest medical grade foam
- Foamtips™ Pro swab (CFP50) has a blue scrubber side and a soft absorbent side
- Available in a variety of head sizes and shapes with various handle lengths

Product	Pkg Count	Swab Length	Handle Width	Head Length	Head Width	Handle Material	Head Material
Foamtips™ Pro CFP50	50 swabs	6.75" 17.1 cm	0.20" x 0.13" 4.8 mm x 3.3 mm	white head: 0.75" 19.1 mm blue/white head: 0.69" 17.5 mm	white head: 0.44" 11.1 mm blue/white head: 0.28" 17.1 mm	polypropylene	white side: 100 ppi open cell foam blue side: 75 ppi closed cell
<i>Scrubber Side</i>							
Foamtips™ #100 CF50	50 swabs	6.10" 15.5 cm	0.06" x 0.06" 1.5 mm x 1.5 mm	0.88" 22.3 mm	0.38" 9.6mm	wood	100 ppi open cell foam over cotton bud
Foamtips™ #110 CF1050	50 swabs	5.00" 12.7 cm	0.19" x 0.13" 4.8 mm x 3.3 mm	0.38" 9.7 mm	0.82" 20.8 mm	polypropylene	100 ppi open cell foam
Foamtips™ #120 CF2050	50 swabs	5.12" 13.0 cm	0.19" x 0.05" 4.8 mm x 1.3 mm	1.00" 25.4 mm	0.50" 12.7 mm	polypropylene	100 ppi open cell foam
Foamtips™ #130 CF3050	50 swabs	6.00" 15.4 cm	0.13" x 0.13" 3.3 mm x 3.3 mm	0.75" 19.0 mm	0.25" 6.3 mm	polypropylene	100 ppi open cell foam
Foamtips™ #140 CF4050	50 swabs	2.87" 7.3 cm	0.10" x 0.10" 2.7 mm x 2.7 mm	0.50" 12.7 mm	0.19" 4.8 mm	polypropylene	100 ppi open cell foam

Swabs and Applicators

Flextips™ & Super Flextips™

Ideal flexible heads for cleaning optics and small confined areas

- Nonabrasive
- Made without adhesives or glue
- Open cell foam on Flextips for high absorbency, soil capture and gentle cleaning
- Closed cell foam on Super Flextips for increased toughness and abrasion resistance



Product	Pkg Count	Swab Length	Handle Width	Head Length	Head Width	Handle Material	Head Material
Flextips™ CX50	50 swabs	4.45" 11.3 cm	0.16" x 0.16" 4.0 mm x 4.0 mm	0.81" 20.5 mm	0.25" 6.3 mm	nylon/polypropylene	100 ppi open cell foam

Super Flextips™ SX50	50 swabs	4.45" 11.3 cm	0.16" x 0.16" 4.0 mm x 4.0 mm	0.81" 20.5 mm	0.25" 6.3 mm	nylon/polypropylene	100 ppi closed cell foam
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Flextips™ Mini CXM50	50 swabs	4.13" 10.5 cm	0.16" x 0.16" 4.0 mm x 4.0 mm	0.53" 13.5 mm	0.19" 4.8 mm	nylon/polypropylene	100 ppi open cell foam
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Super Flextips™ Mini SXM50	50 swabs	4.13" 10.5 cm	0.16" x 0.16" 4.0 mm x 4.0 mm	0.53" 13.5 mm	0.19" 4.8 mm	nylon/polypropylene	100 ppi closed cell foam
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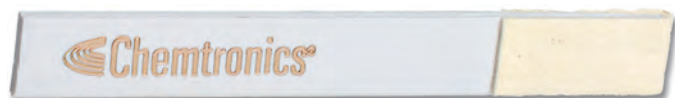


Chamois Tips™

Ideal swab for cleaning magnetic and optical, audio and video heads

- Synthetic chamois cloth head
- Material is free of oils and residues
- Flexible handle bends to clean hard-to-reach areas
- Bonded without adhesives
- Seamless construction
- Effectively cleans excess ink from ink jet cartridges
- Abrasion resistant
- Non-snagging

Product	Pkg Count	Swab Length	Handle Width	Head Length	Head Width	Handle Material	Head Material
CC50	50 swabs	3.25" 8.25 cm	0.38" x 0.07" 9.6 mm x 1.7 mm	0.88" 22.3 mm	0.38" 9.6 mm	ABS (acrylonitrile-butadiene-styrene)	synthetic chamois cloth



Microtips™

Precision applicator for pinpoint solvent, adhesive and lubricant application

- Porous polyvinylidene fluoride-tipped precision applicator and cleaning tool
- Low extractables and particulate levels
- High chemical resistance – compatible with most solvents
- 1.9 mm tapered tip
- Excellent choice for depositing solvents, adhesives and coatings
- Effective as a stylus or pick



Product	Pkg Count	Swab Length	Handle Width	Head Length	Head Width	Handle Material	Head Material
CM502	50 swabs	6.7" 17.0 cm	0.13" x 0.13" 3.3 mm x 3.3 mm	0.62" 15.7 mm	0.07" 1.93 mm	polypropylene	polyvinylidene fluoride



Cottontips™ & Cottontips™ Low Lint

Economical swabs designed for general cleaning applications

- 100% pure pharmaceutical grade bleached white cotton head
- Soft and highly absorbent
- Compatible with most solvents
- Available with single or double head
- Rigid wooden handle

Cottontips™ Low Lint:

- Special low lint cotton fibers used for critical, low particle applications



Product	Pkg Count	Swab Length	Handle Width	Head Length	Head Width	Handle Material	Head Material
Cottontips™ Single-Head CT100	100 swabs	6.00" 15.2 cm	0.08" x 0.08" 2.0 mm x 2.0 mm	0.63" 16 mm	0.19" 4.8 mm	wood	cotton



Cottontips™ Double-Head CT200	100 swabs	6.00" 15.2 cm	0.08" x 0.08" 2.0 mm x 2.0 mm	0.63" 16 mm	0.19" 4.8 mm	wood	cotton
CT2000	1000 swabs	6.00" 15.2 cm	0.08" x 0.08" 2.0 mm x 2.0 mm	0.63" 16 mm	0.19" 4.8 mm	wood	cotton



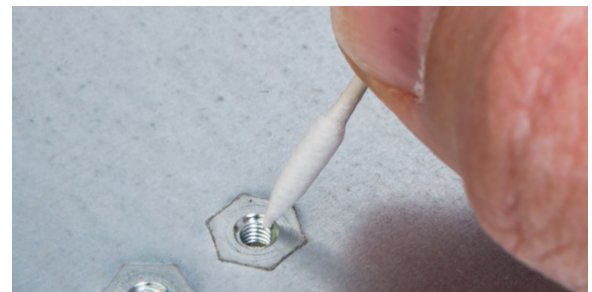
Cottontips™ Low Lint CT5000	1000 swabs	6.00" 15.2 cm	0.08" x 0.08" 2.0 mm x 2.0 mm	0.63" 16 mm	0.19" 4.8 mm	wood	cotton
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Cottontips™ MicroPoint

Low particulate, pointed cotton swab, designed for precision applications

- Tightly wrapped head construction
- Small size for delicate precision cleaning
- Extremely Low linting
- High absorbency capacity and rate
- Good solvent compatibility
- Sharp point
- Non-static generating



Product	Pkg Count	Swab Length	Handle Width	Head Length	Head Width	Handle Material	Head Material
Cottontips™ MicroPoint CCT2425	25 swabs	3.0" 7.5 cm	0.06" x 0.06" 1.5 mm x 1.5 mm	0.47" 12 mm	0.12" 3.0 mm	composite	cotton



U.S. Government National Stock Numbers	Part #	Product Name	Page
0793-00-103-94802	ES1668	Plast-N-Glas®	16
3439-00-009-2334	7-5L	Chem-Wik® Rosin	18
3439-01-009-6448	80-5-5	Soder-Wick®	17
3439-01-198-9716	80-4-10	Soder-Wick®	17
3439-01-324-8208	80-2-5	Soder-Wick®	17
3439-01-371-1588	10-5L	Chem-Wik®	18
416850-01-514-1372	CW3500	CircuitWorks® Conformal Coating Remover Pen	23
4820-01-314-3601	ES710V	Chrome Trigger Valve	14
5836-01-453-8942	CC50	Chamois Tips™	32
5836-01-454-0401	ES820L	IPA	12
5836-01-454-0402	CP400	Chempad™	29
5970-01-417-4152	CTSR-12	Konform® SR	24
5970-01-417-4154	CTSR1	Konform® SR	24
5970-01-417-4156	CTAR1	Konform® AR	24
5970-01-417-4158	CTAR-12	Konform® AR	24
6616-00-077-3218	CF4050	Foamtips™ #140	31
6830-01-381-2675	ES1020K	Ultrajet® System	14
6830-01-388-6924	ES1020R	Ultrajet® Refill	14
6850-00-142-40716	ES1551	Freeze-It® Antistat	15
6850-00-146-38046	ES1217	Duster	14
6850-00-602-2347	ES1631	Flux-Off® Heavy Duty	11
6850-01-224-9211	ES2400	Tun-O-Wash®	8
6850-01-3064	C920	Opticwipes™	30
6850-01-333-1841	ES1550	Freeze-It®	15
6850-01-393-9054	ES1210	Electro-Wash® PX	5
6850-01-406-1356	ES1050	Freeze-It®	15
6850-01-412-0040	ES1020	Ultrajet®	13
6850-01-418-0499	ES1035	Flux-Off® Rosin	11
6850-01-436-4573	ES7300	Pow-R-Wash™ CZ	8
6850-01-436-4578	ES7200	Flux-Off® CZ	10
6850-01-436-4584	ES7100	Electro-Wash® CZ	4
6850-01-436-4585	ES7101	Electro-Wash® CZ	4
6850-01-456-4173	ES835B	Flux-Off® Rosin	11
6850-01-463-8043	ES1017	Duster	14
6850-01-463-8046	ES1217	Duster	14
6850-01-475-0987	CW8100	No Clean Flux Dispensing Pen	22
6850-01-484-3064	CP410	Optic Prep™	29
6850-01-506-5662	CW2200MTP	Conductive Pen	19
6850-01-560-5804	ES1051	Freeze-It® Antistat	15
7045-01-535-0276	CM502	Microtips™	32
7045-01-548-4966	CT5000	Cottontips™ Low Lint	33
7930-01-467-3289	CFP50	Foamtips™ Pro	31
7930-01-559-5328	CP421	Electro-Wash® MX Presaturated Wipe	29
8030-01-511-6308	CW3300C	CircuitWorks® Overcoat Pen	21
8510-01-358-8836	C805	Static Free™ Hand Guard™	16
9150-01-508-9999	CW7100	Conductice Grease	20
9390-01-552-1552	80-3-5	Soder-Wick®	17

Part #	Page	Part #	Page	Part #	Page	Part #	Page	Part #	Page
10-100L	18	70-3-25	18	CSP20	29	CW8500	22	ES1550.....	15
10-25L	18	7-100L	18	CT100.....	33	CW8700	22	ES1551.....	15
10-500L	18	7-25L	18	CT200.....	33	CW9100	23	ES1603.....	5
10-50L	18	7-500L	18	CT40-5	20	CW9200	23	ES1605.....	7
10-5L	18	7-50L	18	CT5000.....	33	CW9400	23	ES1607.....	5
2-100L	18	75-2-10.....	18	CTAR1.....	24	CWF1.....	28	ES1617.....	14
2-25L	18	75-3-10	18	CTAR-12	24	CWF8.....	28	ES1620.....	13
2-500L	18	75-4-10	18	CTHR1	26	CX50	32	ES1621.....	5
2-50L	18	7-5L	18	CTHR5	26	CXM50.....	32	ES1624.....	14
2-5L	18	80-1-10	17	CTLED1.....	25	DEL101.....	3	ES1626.....	8
40-1-5	17	80-1-5	17	CTLED5.....	25	DEL1601.....	3	ES1631.....	11
40-2-10	17	80-2-10	17	CTSR1	24	DEL1608B.....	5	ES1664T.....	16
40-2-5	17	80-2-5	17	CTSR-12	24	DEL1681.....	7	ES1668.....	16
40-3-10	17	80-3-10	17	CTSR5	24	DEL1692.....	9	ES1696.....	12
40-3-5	17	80-3-5	17	CTSR-HV1	24	DEL192.....	9	ES1697.....	11
40-4-10	17	80-4-10	17	CTUFC55.....	26	DEL2201.....	3	ES1698.....	10
40-4-5	17	80-4-5	17	CTUFD1	26	DEL5501.....	3	ES189.....	6
50-1-25	17	80-5-10	17	CTUFD-12.....	26	DEL5592.....	9	ES191.....	6
50-2-100	17	80-5-5	17	CTUFD5	26	DEL592.....	9	ES196.....	12
50-2-25	17	80-6-5	17	CTURA1	26	DEL892B.....	9	ES197.....	11
50-2-500	17	C805	16	CTURA5	26	ES1015.....	13	ES198.....	10
50-3-100	17	C900	30	CW2000	19	ES1017.....	14	ES2289.....	6
50-3-25	17	C910	30	CW2200MTP.....	19	ES1020.....	13	ES2291.....	6
50-3-500	17	C920	30	CW2200STP.....	19	ES1020K.....	14	ES2400.....	8
50-4-100	17	CC50	32	CW2400	21	ES1020R.....	14	ES2425.....	8
50-4-25	17	CCT2425	33	CW2460	21	ES1025.....	14	ES505.....	12
50-4-500	17	CF1050.....	31	CW2500	21	ES1029.....	14	ES535.....	11
50-5-25	17	CF2050.....	31	CW2605	19	ES1035.....	11	ES5505.....	12
50-6-25	17	CF3050.....	31	CW2900	19	ES1035B.....	11	ES5535.....	11
5-100L	18	CF4050.....	31	CW3300B	21	ES105.....	12	ES5589.....	6
5-25L	18	CF50	31	CW3300BLACK	21	ES1050.....	15	ES5591.....	6
5-500L	18	CFP50.....	31	CW3300C	21	ES1051.....	15	ES5596.....	12
5-50L	18	CHV8	28	CW3300G	21	ES1052.....	15	ES5597.....	11
5-5L	18	CLF1	27	CW3300WHITE.....	21	ES1054.....	15	ES5598.....	10
60-1-10	17	CLF8.....	27	CW3500	23	ES1055.....	15	ES589.....	6
60-1-5	17	CM1.....	27	CW3700	23	ES1056.....	15	ES596.....	12
60-2-10	17	CM502.....	32	CW7000	22	ES107.....	5	ES598.....	10
60-2-5	17	CM8.....	27	CW7100	20	ES110.....	5	ES6100.....	4
60-3-10	17	CMAQ1	28	CW7250	20	ES1210.....	5	ES6101.....	4
60-3-5	17	CMAQ8	28	CW7270	20	ES1217.....	14	ES6119.....	4
60-4-10	17	CNA1	27	CW7400	23	ES125A.....	5	ES6155.....	4
60-4-5	17	CNA8	27	CW8	28	ES130.....	12	ES6200.....	10
60-5-10	17	CP400	29	CW8100	22	ES131.....	11	ES6201.....	10
60-5-5	17	CP410	29	CW8200	22	ES132.....	12	ES6255.....	10
60-6-5	17	CP421	5, 29	CW8300	22	ES135.....	11	ES6300.....	8
70-2-25	18	CS25	29	CW8400	22	ES1530.....	12	ES6301.....	8
								ES7100.....	4
								ES7101.....	4
								ES710V.....	14
								ES7200.....	10
								ES7208B.....	10
								ES7300.....	8
								ES810.....	5
								ES820L.....	12
								ES835B.....	11
								ES896B.....	12
								ES897B.....	11
								FW2150.....	5, 23
								FW2150BLK.....	23
								FW2170.....	23
								FW2190.....	23
								IPA100B.....	29
								S200.....	22
								SIP100P.....	29
								SIP125P.....	29
								SIP91P.....	29
								SW14025	17
								SW14035	17
								SW14045.....	17
								SW16015	17
								SW16025	17
								SW16035	17
								SW16045	17
								SW16055	17
								SW18015	17
								SW18025	17
								SW18035	17
								SW18045	17
								SW18055	17
								SX50.....	32
								SXM50.....	32
								VW114.....	3
								VW1614.....	3
								VW179.....	6
								VW195.....	9
								VW2279.....	6
								VW514.....	3
								VW5514.....	3
								VW5579.....	6
								VW5595.....	9
								VW579.....	6
								VW595.....	9

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