Superior products for electronic prototyping, assembly & maintenance
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!
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 oil, grease, oxides and handling contamination from equipment and assemblies.

**Electro-Wash® QD**
Fast drying, nonflammable electronics cleaner degreaser
- Nonflammable, no chlorocarbons
- Excellent material compatibility
- Displaces moisture
- Evaporates fast, minimizes down time
- NSF registered K1 and K2
- All-Way Spray aerosol

DEL1608B 12 oz / 340 g BrushClean™ 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
- All-Way Spray and BrushClean attachment

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

**All-Way Spray**
Chemtronics aerosol products (where indicated) can spray even when rotated to clean hard-to-reach places.
### Electro-Wash® Delta
Extra-strength, nonflammable electronics cleaner degreaser
- Nonflammable
- Best AK225 replacement chemistry
- Fast drying
- Contains no ozone depleting compounds, low VOC’s
- NSF registered K1 and K2
- All-Way Spray aerosol

<table>
<thead>
<tr>
<th>Cleaner Degreasers</th>
<th>Plastic-Safe</th>
<th>Nonflammable</th>
<th>No Ozone Depleting Chemicals</th>
<th>Dries Fast</th>
<th>Dielectric Breakdown (Aerosol)</th>
<th>VOC-EPA (Aerosol / Liquid)</th>
<th>Grease</th>
<th>Oil</th>
<th>Tonic Soap</th>
<th>Aerosol Spray</th>
<th>Vapor Degreasing</th>
<th>Ultrasonics</th>
<th>Hot Immersion</th>
<th>Cold Immersion</th>
<th>Cleaning Ability</th>
<th>Cleaning Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electro-Wash® Tri-V</td>
<td>NR</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>21kV</td>
<td>70% / 95%</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Strongest Cleaner</td>
<td></td>
</tr>
<tr>
<td>Electro-Wash® Delta</td>
<td>2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>31kV</td>
<td>63% / 85%</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro-Wash® NXO</td>
<td>3</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>15kV</td>
<td>38% / 50%</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro-Wash® OD</td>
<td>2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>11kV</td>
<td>0% / NA</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro-Wash® VZ</td>
<td>2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>17kV</td>
<td>19% / 45%</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro-Wash® PX</td>
<td>1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>75% / 100%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro-Wash® MX</td>
<td>1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>75% / 100%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro-Wash® PR</td>
<td>1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>75% / NA</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro-Wash® CZ</td>
<td>1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>17kV</td>
<td>75% / NA</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>✓</td>
<td>-</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro-Wash® Two Step*</td>
<td>NR</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>NA / 100%</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Max-Kleen™ Tri-V
8kV 70% / 90%

<table>
<thead>
<tr>
<th>Cleaner Degreasers</th>
<th>Plastic-Safe</th>
<th>Nonflammable</th>
<th>No Ozone Depleting Chemicals</th>
<th>Dries Fast</th>
<th>Dielectric Breakdown (Aerosol)</th>
<th>VOC-EPA (Aerosol / Liquid)</th>
<th>Grease</th>
<th>Oil</th>
<th>Tonic Soap</th>
<th>Aerosol Spray</th>
<th>Vapor Degreasing</th>
<th>Ultrasonics</th>
<th>Hot Immersion</th>
<th>Cold Immersion</th>
<th>Cleaning Ability</th>
<th>Cleaning Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max-Kleen™ Citrus</td>
<td>1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>62kV</td>
<td>49% / 49%</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max-Kleen™ Citrus HF</td>
<td>1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>33kV</td>
<td>50% / 4%</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Plastic safety rated at room temperature 1 – Excellent 2 – Good 3 – Fair NR – Not Recommended

**Features**
- Plastic-Safe
- Nonflammable
- No Ozone Depleting Chemicals
- Dries Fast
- Dielectric Breakdown (Aerosol)
- VOC-EPA (Aerosol / Liquid)
- Grease
- Oil
- Tonic Soap
- Aerosol Spray
- Vapor Degreasing
- Ultrasonics
- Hot Immersion
- Cold Immersion

**Cleaning Ability**
- Strongest Cleaner
- Most Plastic-Safe

**Cleaning Methods**
- Ultrasonic
- Hot Immersion
- Cold Immersion

**Product Selection Guide**

**Industrial Degreasers**
- Max-Kleen™ Tri-V
- Max-Kleen™ Citrus
- Max-Kleen™ Citrus HF

**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
- NSF registered K1 and K2

<table>
<thead>
<tr>
<th>Cleaner Degreasers</th>
<th>Plastic-Safe</th>
<th>Nonflammable</th>
<th>No Ozone Depleting Chemicals</th>
<th>Dries Fast</th>
<th>Dielectric Breakdown (Aerosol)</th>
<th>VOC-EPA (Aerosol / Liquid)</th>
<th>Grease</th>
<th>Oil</th>
<th>Tonic Soap</th>
<th>Aerosol Spray</th>
<th>Vapor Degreasing</th>
<th>Ultrasonics</th>
<th>Hot Immersion</th>
<th>Cold Immersion</th>
<th>Cleaning Ability</th>
<th>Cleaning Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>VVV1614</td>
<td>12 oz / 340 g aerosol</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VVV114</td>
<td>1 gal / 3.7 L liquid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VVV514</td>
<td>5 gal / 19 L liquid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VVV5514</td>
<td>53 gallons / 200 L liquid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Electro-Wash® NXO**

**Electro-Wash® OD**

**Electro-Wash® VZ**

**Electro-Wash® PX**

**Electro-Wash® MX**

**Electro-Wash® PR**

**Electro-Wash® CZ**

**Electro-Wash® Two Step**

**Max-Kleen™ Tri-V**

**Max-Kleen™ Citrus**

**Max-Kleen™ Citrus HF**

**Cleaner Degreasers**

---

**Product Selection Guide**

**Strongest Cleaner**

**Most Plastic-Safe**

---

www.chemtronics.com
**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
- All-Way Spray aerosol

- **ES1621** 10 oz / 283 g aerosol
- **CP421** 25 - 8” x 10” / 20.3 cm x 25.4 cm premoistened wipes (9 ml each)
- **FW2150** 9 g / 0.32 oz pen

**Electro-Wash® NXO**
Extra-strength, nonflammable cleaner degreaser

- Nonflammable
- Extra cleaning strength
- Dries fast
- Leaves no residue
- Test on plastics
- All-Way Spray aerosol

- **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
- All-Way Spray aerosol

- **ES1603** 10 oz / 283 g aerosol
- **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
- All-Way Spray aerosol

- **ES1603** 10 oz / 283 g aerosol
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.

**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
- All-Way Spray aerosol

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES2289</td>
<td>Citrus-based</td>
<td>15 oz / 425 g</td>
</tr>
<tr>
<td>ES189</td>
<td>Citrus-based</td>
<td>1 gal / 3.7 L</td>
</tr>
<tr>
<td>ES589</td>
<td>Citrus-based</td>
<td>5 gal / 19 L</td>
</tr>
<tr>
<td>ES5589</td>
<td>Citrus-based</td>
<td>53 gallons / 200 L</td>
</tr>
</tbody>
</table>

**Max-Kleen™ Citrus HF**
High flashpoint citrus-based degreaser for heavy greases
- Citrus-based formula with a high flash point
- Quickly removes all types of tough soils including oxidized oil and grease
- Safe for use on most metals and plastics
- Flashpoint greater than 140º F
- Non-corrosive and nonconductive
- Low Toxicity
- Leaves no residue
- All-Way Spray aerosol

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES2291</td>
<td>Citrus-based</td>
<td>13.5 oz / 383 g aerosol</td>
</tr>
<tr>
<td>ES5591</td>
<td>Citrus-based</td>
<td>53 gallons / 200 L liquid</td>
</tr>
</tbody>
</table>

**Max-Kleen™ Tri-V™**
Extra-strength, nonflammable heavy duty degreaser for replacing n-propyl bromide
- Nonflammable
- Can be used on energized equipment
- Full azeotrope — ideal when reclamation process is required
- Fast drying
- Does not contain n-propyl bromide, trichloroethylene, or perchloroethylene
- NSF registered K1 and K2

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>VVV2279</td>
<td>20 oz / 567 g aerosol</td>
<td></td>
</tr>
<tr>
<td>VVV179</td>
<td>1 gal / 3.7 L liquid</td>
<td></td>
</tr>
<tr>
<td>VVV579</td>
<td>5 gal / 19 L liquid</td>
<td></td>
</tr>
<tr>
<td>VVV5579</td>
<td>53 gallons / 200 L liquid</td>
<td></td>
</tr>
</tbody>
</table>
**Pow-R-Wash™ Delta**
Nonflamable 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
- All-Way Spray aerosol

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
- All-Way Spray aerosol

ES1605 10 oz / 283 g aerosol

---

**Product Selection Guide**

<table>
<thead>
<tr>
<th>Cleaner Degreasers</th>
<th>Plastic-Safe</th>
<th>Nonflammable</th>
<th>Cleaning Strength</th>
<th>No Ozon Depleting Chemicals</th>
<th>Dries Fast</th>
<th>VOC-EPA (Aerosol / Liquid)</th>
<th>For Use On Live Circuits</th>
<th>Dielectric Breakdown</th>
<th>Lubrication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pow-R-Wash® Delta</td>
<td>2</td>
<td>✓</td>
<td>X</td>
<td>✓</td>
<td>✓</td>
<td>56% / NA</td>
<td>30kV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pow-R-Wash® Cable Cleaner</td>
<td>1</td>
<td>X</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>50% / NA</td>
<td>62kV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pow-R-Wash® VZ</td>
<td>2</td>
<td>✓</td>
<td>R</td>
<td>✓</td>
<td>✓</td>
<td>16% / 75%</td>
<td>15kV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pow-R-Wash® PR</td>
<td>1</td>
<td>R</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>75% / NA</td>
<td>44kV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tune-O-Wash</td>
<td>1</td>
<td>R</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>75% / NA</td>
<td>23kV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DPL® Deep Penetrating Lubricant</td>
<td>1</td>
<td>R</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>NA</td>
<td>0% / NA</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Pow-R-Wash® CZ</td>
<td>1</td>
<td>✓</td>
<td>R</td>
<td>✓</td>
<td>✓</td>
<td>7% / NA</td>
<td>31kV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 – Excellent  2 – Good  R – Regular Strength  X – Extra Strength  * For lubrication only
**Contact Cleaners / Lubricant**

**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
- All-Way Spray aerosol

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
- All-Way Spray aerosol

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
- All-Way Spray aerosol

ES2425 13.5 oz / 385 g aerosol

**Tun-O-Wash® Cleaner**
Universal fast drying cleaner for electromechanical and electronic tuners

- Safe on plastics
- Flammable
- Dries fast
- Leaves no residue
- Cleans hard-to-reach areas
- All-Way Spray aerosol

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
- 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
- All-Way Spray aerosol

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
- All-Way Spray aerosol

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

**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

VVV595 5 gal / 18.9 L liquid
VVV5595 53 gal / 200 L liquid
## Flux Removers

### Product Selection Guide

<table>
<thead>
<tr>
<th></th>
<th>Primary Flux Residue Cleaned</th>
<th>Features</th>
<th>Cleaning Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rosin Based</td>
<td>No Clean</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SK-Synthetic</td>
<td>Water Soluble</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plastic Safe</td>
<td>Plastic Nonflammable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nonflammable</td>
<td>Dry Fast</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>VOC-EPA (Aerosol / Liquid)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Aerosol Spray</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hand Cleaning</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vapor Degreasing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ultrasonics</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Immersion</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Benchtop Spray System</td>
<td></td>
</tr>
</tbody>
</table>

| Flux-Off® Tri-V   | 1                             | 1                               | NR             | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | 95% / NA |
| Flux-Off® Delta   | 1                             | 1                               | NR             | 2     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | 39% / 52% |
| Flux-Off® Heavy Duty | 1            | 1                               | 2              | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | ✓     | 38% / 50% |
| Flux-Off® VZ      | 1                             | 2                               | NR             | 2     | ✓     | 25% / 75% | ✓     | ✓     | ✓     | ✓     |    |
| Flux-Off® Complete | 1                       | 1                               | NR             | 2     | ✓     | 42% / 42% | ✓     | ✓     | ✓     | ✓     |    |
| Flux-Off® Lead-Free | 1               | 2                               | 2              | ✓     | ✓     | 48% / 51% | ✓     | ✓     | ✓     | ✓     |    |
| Flux-Off® No Clean Plus | 1        | 1                               | 2              | ✓     | ✓     | 48% / 51% | ✓     | ✓     | ✓     | ✓     |    |
| Flux-Off® Rosin   | 1                             | 2                               | 2              | 1     | ✓     | 75% / 100% | ✓     | ✓     | ✓     | ✓     |    |
| Flux-Off® Water Soluble | 1            | NR                             | 1              | 1     | ✓     | 75% / 75% | ✓     | ✓     | ✓     | ✓     |    |
| Flux-Off® Aqueous | 1                             | 2                               | 1              | ✓     | ✓     | NA / 16% | ✓     | ✓     | ✓     | ✓     |    |
| Flux-Off® CZ      | 1                             | 2                               | NR             | 1     | ✓     | 22% / NA | ✓     | ✓     | ✓     | ✓     |    |

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
- All-Way Spray aerosol

**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
- All-Way Spray aerosol

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

### Flux-Off® Rosin
**Plastic safe flux remover for cleaning all rosin and rosin-based no-clean flux**
- Safe on plastics
- Nonflammable
- Evaporates quickly
- Leaves no residue
- All-Way Spray aerosol

**ES1035** 10 oz / 283 g aerosol
**ES1035B** 10 oz / 283 g BrushClean™ System
**ES535** 5 oz / 141 g BrushClean™ System
**ES1135** 1 gal / 3.7 L liquid
**ES5535** 5 gal / 18.5 L liquid

---

www.chemtronics.com
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
- All-Way Spray aerosol
ES1697 12 oz / 340 g aerosol
ES897B 6 oz / 170 g BrushClean™ System
ES197 1 gal / 3.7 L liquid
ES597 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
- All-Way Spray aerosol
ES1631 12 oz / 340 g aerosol
ES131 1 gal / 3.7 L liquid

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
- All-Way Spray aerosol
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

The BrushClean™ System
Gentle scrubbing action of a brush combined with high performance flux removers
BrushClean™ System for difficult fluxes

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

Flux Removers
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

Flux-Off® No Clean Plus
Powerful economical flux remover for cleaning no-clean flux
- Flammable
- Dries fast
- Leaves no residue
- Test on plastics
- All-Way Spray aerosol
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

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
- Meets Fed Spec TT-1-735A
ES605L 16 fl oz / 473 ml liquid
ES105 1 gal / 3.7 L liquid
ES505 5 gal / 18.9 L liquid
ES5505 53 gal / 200 L liquid
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

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
## Product Selection Guide

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

* 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

## 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

## 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

## 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

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

**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
ES1550 15 oz / 425 g aerosol

**Freeze-It®**
High-performance, pin-point accurate freeze spray for isolating individual components on PC boards
- Pin-point 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, pin-point accurate freeze spray that safely cools individual static-sensitive components
- Pin-point 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

**Arctic Blast™**
Ultra-low GWP freeze spray with pin-point accuracy for isolating individual components
- Ultra-low Global Warming Potential
- Pin-point spray isolates individual components without freezing surrounding areas
- Safe on plastics
- Nonflammable
- Filtered to 0.2 microns
ES1054 10 oz / 283 g aerosol
ES1554 15 oz / 425 g aerosol

**Arctic Blast™ Antistat**
Ultra-low GWP antistatic freeze spray with pin-point accuracy for isolating individual components
- Ultra-low Global Warming Potential
- Pin-point 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

**Product Selection Guide**

<table>
<thead>
<tr>
<th>Product</th>
<th>Application</th>
<th>Global Warming Potential*</th>
<th>VOC (EPA)</th>
<th>Frost Formation</th>
<th>Cooling Speed</th>
<th>Cooling Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arctic Blast™</td>
<td>Pin-point</td>
<td>&lt;1</td>
<td>0%</td>
<td>Yes</td>
<td>Fast</td>
<td>-49°F/-45°C</td>
</tr>
<tr>
<td>Arctic Blast™ Antistat</td>
<td>Pin-point</td>
<td>&lt;1</td>
<td>&lt;1%</td>
<td>No</td>
<td>Fast</td>
<td>-49°F/-45°C</td>
</tr>
<tr>
<td>Freeze-It®</td>
<td>Pin-point</td>
<td>1300</td>
<td>0%</td>
<td>Yes</td>
<td>Fast</td>
<td>-60°F/-51°C</td>
</tr>
<tr>
<td>Freeze-It® Antistat</td>
<td>Pin-point</td>
<td>1300</td>
<td>&lt;1%</td>
<td>No</td>
<td>Fast</td>
<td>-60°F/-51°C</td>
</tr>
<tr>
<td>Freeze Spray</td>
<td>Wide Area</td>
<td>1300</td>
<td>0%</td>
<td>Yes</td>
<td>Very Fast</td>
<td>-60°F/-51°C</td>
</tr>
</tbody>
</table>

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

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

770-424-4888 | 800-645-5244

15
**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

**Screen Prep™ Presaturated Wipe**
Convenient cleaning and static control for monitors
- Prevents airborne recontamination for up to 7 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

**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 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

**Static Free™ Mat and Benchtop Reconditioner**
Cleans and rejuvenates ESD-safe surfaces
- Cleans and rejuvenates burned or dead spots on 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

**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/ESD S20.20.

**Screen Prep™**
Presaturated Wipe
Convenient cleaning and static control for monitors
- Prevents airborne recontamination for up to 7 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

**C805** 8 fl oz / 236 ml liquid

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

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

**ES1668** 14 oz / 397 g aerosol

**ES1664T** 16 fl oz / 472 mL Trigger Spray

**SIP125P1664** 125 presaturated wipes in pull-up tub

**6209HC1664** 150 presaturated cleanroom wipes in ESD pouch
**Desoldering Braid**

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.

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

<table>
<thead>
<tr>
<th>Product</th>
<th>Size</th>
<th>Color</th>
<th>1.5m</th>
<th>3.0m</th>
<th>7.5m</th>
<th>10.0m</th>
<th>25.0m</th>
<th>50.0m</th>
<th>500.0m</th>
<th>5’ / 1.5m</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Soder-Wick® Rosin</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fastest wicking action with rosin flux coated desoldering braid</td>
<td>1</td>
<td>.030”/0.8mm White</td>
<td>80-1-5</td>
<td>80-1-10</td>
<td>50-1-25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW18015</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.060”/1.5mm Yellow</td>
<td>80-2-5</td>
<td>80-2-10</td>
<td>50-2-25</td>
<td>50-2-100</td>
<td>50-2-250</td>
<td>50-2-500</td>
<td>50-2-25</td>
<td>SW18025</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>.080”/2.0mm Green</td>
<td>80-3-5</td>
<td>80-3-10</td>
<td>50-3-25</td>
<td>50-3-100</td>
<td>50-3-100</td>
<td></td>
<td></td>
<td>SW18035</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>.110”/2.8mm Blue</td>
<td>80-4-5</td>
<td>80-4-10</td>
<td>50-4-25</td>
<td>50-4-100</td>
<td></td>
<td></td>
<td></td>
<td>SW18045</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>.145”/3.7mm Brown</td>
<td>80-5-5</td>
<td>80-5-10</td>
<td>50-5-25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW18055</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>.210”/5.3mm Red</td>
<td>80-6-5</td>
<td></td>
<td>50-6-25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Soder-Wick® No Clean</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleanest, leaving behind no ionic residue, with no clean flux coated desoldering braid</td>
<td>1</td>
<td>.030”/0.8mm White</td>
<td>60-1-5</td>
<td></td>
<td>60-1-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW18015</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.060”/1.5mm Yellow</td>
<td>60-2-5</td>
<td></td>
<td>60-2-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW16025</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>.080”/2.0mm Green</td>
<td>60-3-5</td>
<td></td>
<td>60-3-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW16035</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>.110”/2.8mm Blue</td>
<td>60-4-5</td>
<td></td>
<td>60-4-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW16045</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>.145”/3.7mm Brown</td>
<td>60-5-5</td>
<td></td>
<td>60-5-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>.210”/5.3mm Red</td>
<td>60-6-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Soder-Wick® Lead-Free</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safest on thermally sensitive components, with this specially engineered no clean flux coated desoldering braid</td>
<td>1</td>
<td>.030”/0.8mm White</td>
<td>40-1-5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW18015</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>.060”/1.5mm Yellow</td>
<td>40-2-5</td>
<td></td>
<td>40-2-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW14025</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>.080”/2.0mm Green</td>
<td>40-3-5</td>
<td></td>
<td>40-3-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW14035</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>.110”/2.8mm Blue</td>
<td>40-4-5</td>
<td></td>
<td>40-4-10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SW14045</td>
</tr>
</tbody>
</table>

*Offered in static dissipative (ESD-safe) 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.

Other 5’ and 10’ packaged 25 bobbins per nitrogen purged sleeve, all others 1 spool/sleeve.
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

<table>
<thead>
<tr>
<th>Product</th>
<th>Size</th>
<th>Color</th>
<th>5'</th>
<th>25'</th>
<th>50'</th>
<th>100'</th>
<th>500'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem-Wik® Rosin</td>
<td>.030&quot;/0.8mm</td>
<td>Gray</td>
<td>2-5L</td>
<td>2-25L</td>
<td>2-50L</td>
<td>2-100L</td>
<td>2-500L</td>
</tr>
<tr>
<td></td>
<td>.050&quot;/1.3mm</td>
<td>Yellow</td>
<td>5-5L</td>
<td>5-25L</td>
<td>5-50L</td>
<td>5-100L</td>
<td>5-500L</td>
</tr>
<tr>
<td></td>
<td>.075&quot;/1.9mm</td>
<td>Green</td>
<td>7-5L</td>
<td>7-25L</td>
<td>7-50L</td>
<td>7-100L</td>
<td>7-500L</td>
</tr>
<tr>
<td></td>
<td>.100&quot;/2.5mm</td>
<td>Blue</td>
<td>10-5L</td>
<td>10-25L</td>
<td>10-50L</td>
<td>10-100L</td>
<td>10-500L</td>
</tr>
</tbody>
</table>

*Offered in static dissipative (ESD-safe) 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

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

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 insulating; noncorrosive and nonflammable
- Thermal conductivity 1.85 W/m°K
- Thermally stable from -99.4°F/-73°C to 392°F/200°C
- Exceeds MIL-C-47113 for Thermal Conductivity

**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
- Thermal conductivity 0.71 W/m°K
- Thermally stable from -99°F/-73°C to 603°F/317°C
- Exceeds MIL-C-47113 for thermal conductivity

**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
- Thermal conductivity 0.63 W/m°K
- Thermally stable from -99°F/-73°C to 603°F/317°C

CT40-5  142 g / 5 oz

**CT40-5 Heat Sink Grease**
Non-contaminating silicone free heat-sink grease
- Excellent thermal conductivity and dielectric properties
- Non-corrosive
- Thermal conductivity 0.71 W/m°K
- Thermally stable from -99°F/-73°C to 603°F/317°C

CW7250  3.4 g / 0.12 oz
CW7250KG  1 kg / 2.2 lb
CircuitWorks® Repair and Prototype Tools

Conductive Ink

Conductive Ink Applications:
• Repairs traces
• Links components
• Makes smooth jumpers
• Shields electronics

CircuitWorks®
Conductive Paint
Paint kit for fine conductive traces or painting over large areas
• Quickly creates highly conductive silver traces
• Superior electrical conductivity
• Dries in minutes at room temperature
• Includes 1 pick, 2 lint-free swabs and 2 brushes
CW2205 5 g / 0.18 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

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 from -70°F/-57°C to 485°F/252°C
• Conductive lubricant containing pure silver
• Controls static discharge
• Grounds circuits
CW7100 6.5 g / 0.23 oz
CW7100KG 1 KG / 35.27 oz

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

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 8.5 g / 0.3 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

NEW!
CircuitWorks®
Conductive Ink
Applications:
• Repairs traces
• Links components
• Makes smooth jumpers
• Shields electronics

CircuitWorks®
Conductive Paint
Paint kit for fine conductive traces or painting over large areas
• Quickly creates highly conductive silver traces
• Superior electrical conductivity
• Dries in minutes at room temperature
• Includes 1 pick, 2 lint-free swabs and 2 brushes
CW2205 5 g / 0.18 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

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 from -70°F/-57°C to 485°F/252°C
• Conductive lubricant containing pure silver
• Controls static discharge
• Grounds circuits
CW7100 6.5 g / 0.23 oz
CW7100KG 1 KG / 35.27 oz

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

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 8.5 g / 0.3 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

NEW!
CircuitWorks®
Conductive Ink
Applications:
• Repairs traces
• Links components
• Makes smooth jumpers
• Shields electronics

CircuitWorks®
Conductive Paint
Paint kit for fine conductive traces or painting over large areas
• Quickly creates highly conductive silver traces
• Superior electrical conductivity
• Dries in minutes at room temperature
• Includes 1 pick, 2 lint-free swabs and 2 brushes
CW2205 5 g / 0.18 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

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 from -70°F/-57°C to 485°F/252°C
• Conductive lubricant containing pure silver
• Controls static discharge
• Grounds circuits
CW7100 6.5 g / 0.23 oz
CW7100KG 1 KG / 35.27 oz

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

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 8.5 g / 0.3 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

NEW!
CircuitWorks®
Conductive Ink
Applications:
• Repairs traces
• Links components
• Makes smooth jumpers
• Shields electronics

CircuitWorks®
Conductive Paint
Paint kit for fine conductive traces or painting over large areas
• Quickly creates highly conductive silver traces
• Superior electrical conductivity
• Dries in minutes at room temperature
• Includes 1 pick, 2 lint-free swabs and 2 brushes
CW2205 5 g / 0.18 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

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 from -70°F/-57°C to 485°F/252°C
• Conductive lubricant containing pure silver
• Controls static discharge
• Grounds circuits
CW7100 6.5 g / 0.23 oz
CW7100KG 1 KG / 35.27 oz
Conductive Epoxy Applications:

- Repair traces and temperature sensitive circuits
- Make high-strength solderless conductive connections
- Die attachment
- Thermal dissipation
- Static discharge and grounding

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
**Flux / Solder**

**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 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 RO0

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Weight</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW8100</td>
<td>9 g / 0.32 oz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW8100BLK50</td>
<td>Box of 50 pens, 9 g each</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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 RO0

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Weight</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW8400</td>
<td>9 g / 0.32 oz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW8400BLK50</td>
<td>Box of 50 pens, 9 g each</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Resin 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 RO0

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Weight</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW8200</td>
<td>9 g / 0.32 oz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW8200BLK</td>
<td>Box of 50 pens, 9 g each</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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. 13)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Weight</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW8300</td>
<td>9 g / 0.32 oz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW8300BLK50</td>
<td>Box of 50 pens, 9 g each</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CircuitWorks® Tacky Flux**
Conveniently packaged flux gel formulated for easy SMT 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 RO0, No Clean
- Conforms to ISO 9454
- Meets Bellcore TR-N-NWT-000078 requirements
- Meets DIN EN 29454-1 1.1.3.C classification

**Lead-Free**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Weight</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW8700</td>
<td>3.5 g / 0.12 oz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW8100</td>
<td>9 g / 0.32 oz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW8700BLK</td>
<td>Box of 50 pens, 9 g each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW8200</td>
<td>9 g / 0.32 oz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CW8200BLK</td>
<td>Box of 50 pens, 9 g each</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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 RO0 flux per IPC J-STD-004
- Ensures even, reliable solder connections
- Cleans and wets heavily tarnished copper surfaces

<table>
<thead>
<tr>
<th>Description</th>
<th>Diameter</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>CW8300</td>
<td>1.0 mm</td>
<td>0.04”</td>
</tr>
<tr>
<td>CW8300BLK50</td>
<td>1.0 mm</td>
<td>0.04”</td>
</tr>
</tbody>
</table>

www.chemtronics.com
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
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
CircuitWorks® MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner
CircuitWorks® Flange 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
Fiber-Wash™ AQ Precision Cleaner Pen
Nonflammable, aqueous fiber optic cleaner
Fiber-Wash™ NF Precision Cleaner Pen
Nonflammable, fast drying fiber optic cleaner
Fiber-Wash™ MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner
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
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
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
CircuitWorks® Flange 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
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
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
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
CircuitWorks® MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner
CircuitWorks® Flange 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
Fiber-Wash™ AQ Precision Cleaner Pen
Nonflammable, aqueous fiber optic cleaner
Fiber-Wash™ NF Precision Cleaner Pen
Nonflammable, fast drying fiber optic cleaner
Fiber-Wash™ MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner
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
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
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
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
CircuitWorks® MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner
CircuitWorks® Flange 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
Fiber-Wash™ AQ Precision Cleaner Pen
Nonflammable, aqueous fiber optic cleaner
Fiber-Wash™ NF Precision Cleaner Pen
Nonflammable, fast drying fiber optic cleaner
Fiber-Wash™ MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner
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
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
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
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
CircuitWorks® MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner
CircuitWorks® Flange 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
Fiber-Wash™ AQ Precision Cleaner Pen
Nonflammable, aqueous fiber optic cleaner
Fiber-Wash™ NF Precision Cleaner Pen
Nonflammable, fast drying fiber optic cleaner
Fiber-Wash™ MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner
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
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
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
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
CircuitWorks® MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner
CircuitWorks® Flange 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
Fiber-Wash™ AQ Precision Cleaner Pen
Nonflammable, aqueous fiber optic cleaner
Fiber-Wash™ NF Precision Cleaner Pen
Nonflammable, fast drying fiber optic cleaner
Fiber-Wash™ MX Precision Cleaner Pen
Convenient pen with the extra-strength, plastic safe precision cleaner
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
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

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 -85ºF/-64ºC to 390ºF/200ºC
- High dielectric breakdown of 1100 volts/mil
- Easily removed with Electro-Wash® Two Step, Electro-Wash® NXO, 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)
- Coverage (@1mil dry):
  - Aerosol (1 can) 21 ft² / 2 m²
  - Liquid (1 gal) 251 ft² / 23.3 m²

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTSR-12</td>
<td>10 oz / 283 g aerosol</td>
<td>21 ft² / 2 m²</td>
</tr>
<tr>
<td>CTSR-P</td>
<td>16 fl oz / 473 ml liquid</td>
<td>251 ft² / 23.3 m²</td>
</tr>
<tr>
<td>CTSR-1</td>
<td>1 gal / 3.7 L liquid</td>
<td>719 ft² / 65.8 m²</td>
</tr>
<tr>
<td>CTSR-5</td>
<td>5 gal / 19 L liquid</td>
<td>3595 ft² / 330.7 m²</td>
</tr>
</tbody>
</table>

**Konform® SR and Konform® AR conformal coatings contain a UV indicator for improved quality assurance.**

Medium Viscosity

- Coverage (@1mil dry): 479 ft² / 44.5 m²

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTSR-MV5</td>
<td>5 gal / 19 L liquid</td>
</tr>
</tbody>
</table>

High Viscosity

- Coverage (@2mil dry): 719 ft² / 65.8 m²

<table>
<thead>
<tr>
<th>Product Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTSR-HV1</td>
<td>1 gal / 3.7 L liquid</td>
</tr>
</tbody>
</table>
The Ideal Replacement Silicone Conformal Coating Is Available Now!

Konform SR-X

- Engineered for maximum flexibility and high temperature resistance
- Exceptional dirt, dust, and soil repellency — stays clean longer
- High gloss, superior transparency
- Superior corrosion protection

Konform® SR-X is a low-VOC silicone conformal coating that provides superior PCB protection from moisture, vibration, and abrasion. Because it is readily available and has very stable and reliable characteristics, it helps keep your assembly process running on schedule.

AVOID LINE-DOWN — Request a sample for qualification TODAY!

Konform® SR-X Silicone Conformal Coating

Low VOC coating for maximum flexibility and protection from extreme temperatures and vibration damage

Konform® SR-X is a one-part, clear conformal coating with firm, moisture and abrasion resistant surface after cure.

Silicone conformal coatings are the most universal coating, offering protection for a wide variety of environments. This coating offers a resilient, mechanical stress reducing protection, while containing reduced VOC content. Utilizing a moisture/humidity-based curing mechanism, this coating cures quickly at ambient conditions.

This high-gloss transparent conformal coating provides ideal protection for both rigid and flexible printed circuit boards. Cured coatings are hydrolytically stable and retain their physical electrical properties after high temperature and humidity exposure. Konform SR-X will not stress delicate circuit components.

Konform SR-X is available in a standard viscosity, which is ideal for manual and selective spray systems, and high viscosity for dipping processes.

Features & Benefits:
- Engineered for applications where flexibility and high temperature resistance are required
- Exceptional dirt, dust, and soil repellency — surfaces remain clean longer
- Low VOC
- Low toxicity — HAPs free
- Silicone coating stable from -76°F/-60°C to 392°F/200°C
- High dielectric strength of 720 volts/mil
- Meets MIL-I-46058C and IPC-CC-830B
- UL 94 V-0 flammability rating
- Meets MIL-STD 810G & MS941-04 salt spray tests
- RoHS Compliant
- Contains a UV indicator for quality control inspection

Konform SRX – Standard Viscosity
CTSRX-P 1 pint / 0.47L liquid
CTSRX-1 1 gallon / 3.8L liquid
CTSRX-5 5 gallon / 18.9L liquid
CTSRX-55 54 gallon / 204L liquid

Konform SRX950 – High Viscosity
CTSRX950-P 1 pint / 0.47L liquid
CTSRX950-1 1 gallon / 3.8L liquid
CTSRX950-5 5 gallon / 18.9L liquid
CTSRX950-55 54 gallon / 204L liquid
**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 breakdown 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
- Coverage (@1mil dry): Aerosol (1 can) 20 ft² / 1.9 m² Liquid (1 gal.) 254 ft² / 23.6 m²

**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
- Coverage (@1mil dry): Liquid (1 gal.) 251 ft² / 23.3 m²

**Konform® AR**

<table>
<thead>
<tr>
<th>Temperature Resistance</th>
<th>Abrasion Resistance</th>
<th>Acid Resistance</th>
<th>Solvent Resistance</th>
<th>Water Submersible Per UL</th>
<th>Temperature</th>
<th>Underwriters Laboratories</th>
<th>Coating Characteristics</th>
<th>Cure Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Konform® SR</td>
<td>1 4 2 2 1</td>
<td>✓</td>
<td>✓</td>
<td>Solvent 40 cps 1 4 3</td>
<td>1100</td>
<td>-85°F to 390°F (-65°C to 200°C)</td>
<td>-15 min. 24 hrs. @RT</td>
<td></td>
</tr>
<tr>
<td>Konform® SR Med. Viscosity</td>
<td>1 4 2 2 1</td>
<td>✓</td>
<td>✓</td>
<td>Solvent 60 cps 1 4 3</td>
<td>1100</td>
<td>-85°F to 390°F (-65°C to 200°C)</td>
<td>-15 min. 24 hrs. @RT</td>
<td></td>
</tr>
<tr>
<td>Konform® SR High Viscosity</td>
<td>1 4 2 2 1</td>
<td>✓</td>
<td>✓</td>
<td>Solvent 120 cps 1 4 3</td>
<td>1100</td>
<td>-85°F to 390°F (-65°C to 200°C)</td>
<td>-15 min. 24 hrs. @RT</td>
<td></td>
</tr>
<tr>
<td>Konform® AR</td>
<td>2 1 1 3 1</td>
<td>✓</td>
<td>✓</td>
<td>Solvent 70 cps 4 3 4 3</td>
<td>8300</td>
<td>-75°F to 270°F (-59°C to 132°C)</td>
<td>-30 min. 24 hrs. @RT</td>
<td></td>
</tr>
<tr>
<td>Konform® SRX</td>
<td>1 4 2 2 1</td>
<td>✓</td>
<td>✓</td>
<td>Solvent 82cps 1 4 3</td>
<td>720</td>
<td>-76°F to 392°F (-60°C to 200°C)</td>
<td>-30 min. 24 hrs. @RT</td>
<td></td>
</tr>
<tr>
<td>Konform® SRX950</td>
<td>1 4 2 2 1</td>
<td>✓</td>
<td></td>
<td>Solvent 950 cps 1 4 3</td>
<td>720</td>
<td>-76°F to 392°F (-60°C to 200°C)</td>
<td>-30 min. 24 hrs. @RT</td>
<td></td>
</tr>
<tr>
<td>Konform® LED</td>
<td>1 4 2 2 1</td>
<td></td>
<td></td>
<td>Solvent 65 cps 1 4 3</td>
<td>1100</td>
<td>-85°F to 390°F (-65°C to 200°C)</td>
<td>-15 min. 24 hrs. @RT</td>
<td></td>
</tr>
</tbody>
</table>

1 – Outstanding 2 – Excellent 3 – Good 4 – Fair NA – Not Available
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

**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

**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

**Chemask®**
- CM8 8 fl oz / 236 ml liquid squeeze bottle
- CM1 1 gal / 3.7 L liquid
- CLF8 8 fl oz / 236 ml liquid squeeze bottle
- CNA8 8 fl oz / 236 ml liquid squeeze bottle
# Temporary Solder Mask

## 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

<table>
<thead>
<tr>
<th>Product</th>
<th>Characteristics</th>
<th>Application Methods</th>
<th>Removal Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemask® HV Water Filterable</td>
<td>Water filterable temporary solder masking agent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemask® LF Lead-Free</td>
<td>Low-foaming, water filterable temporary solder masking agent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemask® NA Non-Ammoniated</td>
<td>Low-foaming, water filterable temporary solder masking agent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## 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

## Chemmask® LF — Lead-Free

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
**Presaturated Wipes and Swabs**

**IPA Presaturated Wipes**
General purpose presaturated wipe in a convenient dispenser

- Ultra pure mixture of IPA and deionized water
- Nonwoven, spunlaced polyester material
- Non-scratching and strong — will not tear or lint
- Ideal for cleaning of semi-automatic printer stencils and touch-up cleaning of automatic printer stencils
- IPA100B wipes are lint free and precut — excellent for cleaning fine pitch stencils

- **SIP100P** 100 presaturated wipes in pull-up tub 70% IPA and 30% deionized water
- **SIP100R** 100 ct refill roll
- **SIP125P** 125 presaturated wipes in pull-up tub 70% IPA and 30% deionized water
- **SIP125R** 125 ct refill roll
- **SIP91P** 100 presaturated wipes in pull-up tub 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
- Highly saturated
- Thick, non-abrasive, wiping pad
- Quickly removes dust, oils and contaminants

**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 6.

**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

**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 wipe polishes screen optically clear

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

**New Package!**
IPA Presaturated Wipes
General purpose presaturated wipe in a convenient dispenser

- Ultra pure mixture of IPA and deionized water
- Nonwoven, spunlaced polyester material
- Non-scratching and strong — will not tear or lint
- Ideal for cleaning of semi-automatic printer stencils and touch-up cleaning of automatic printer stencils
- IPA100B wipes are lint free and precut — excellent for cleaning fine pitch stencils

- **SIP100P** 100 presaturated wipes in pull-up tub 70% IPA and 30% deionized water
- **SIP100R** 100 ct refill roll
- **SIP125P** 125 presaturated wipes in pull-up tub 70% IPA and 30% deionized water
- **SIP125R** 125 ct refill roll
- **SIP91P** 100 presaturated wipes in pull-up tub 91% IPA and 9% deionized water
- **IPA100B** 100 c-fold presaturated wipes 70% IPA and 30% deionized water

**NEW**
IPA100B
IPA Presaturated Wipes
General purpose presaturated wipe in a convenient dispenser

- Ultra pure mixture of IPA and deionized water
- Nonwoven, spunlaced polyester material
- Non-scratching and strong — will not tear or lint
- Ideal for cleaning of semi-automatic printer stencils and touch-up cleaning of automatic printer stencils
- IPA100B wipes are lint free and precut — excellent for cleaning fine pitch stencils

- **SIP100P** 100 presaturated wipes in pull-up tub 70% IPA and 30% deionized water
- **SIP100R** 100 ct refill roll
- **SIP125P** 125 presaturated wipes in pull-up tub 70% IPA and 30% deionized water
- **SIP125R** 125 ct refill roll
- **SIP91P** 100 presaturated wipes in pull-up tub 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
- Highly saturated
- Thick, non-abrasive, wiping pad
- Quickly removes dust, oils and contaminants

**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

**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 wipe polishes screen optically clear

- **CSP20** 25 twin packs
  #1 presaturated pad
  #2 polishing wiper
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.

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

**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 contamination from screens and optical glass surfaces
- Cleaning and absorbing solvents from semi-critical work surfaces

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

**Twillwipes™**
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
### 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 end and a soft absorbent end
- Available in a variety of head sizes and shapes with various handle lengths

<table>
<thead>
<tr>
<th>Product</th>
<th>Pkg Count</th>
<th>Swab Length</th>
<th>Handle Width</th>
<th>Head Length</th>
<th>Head Width</th>
<th>Handle Material</th>
<th>Head Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foamtips™ Pro</td>
<td>50 swabs</td>
<td>6.75&quot;</td>
<td>0.20&quot; x 0.13&quot;</td>
<td>white head:</td>
<td>white head:</td>
<td>polypropylene</td>
<td>white side:</td>
</tr>
<tr>
<td>CFP50</td>
<td></td>
<td>17.1 cm</td>
<td>4.8 mm x 3.3 mm</td>
<td>0.75&quot;</td>
<td>0.44&quot;</td>
<td></td>
<td>100 ppi open cell foam</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19.1 mm</td>
<td>11.1 mm</td>
<td></td>
<td>blue side:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>blue head:</td>
<td>blue head:</td>
<td></td>
<td>75 ppi closed cell</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.69&quot;</td>
<td>0.28&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>17.5 mm</td>
<td>17.1 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foamtips™ #100</td>
<td>50 swabs</td>
<td>6.10&quot;</td>
<td>0.06&quot; x 0.06&quot;</td>
<td>0.88&quot;</td>
<td>0.38&quot;</td>
<td>wood</td>
<td>100 ppi open cell foam over cotton bud</td>
</tr>
<tr>
<td>CF50</td>
<td></td>
<td>15.5 cm</td>
<td>1.5 mm x 1.5 mm</td>
<td>22.4 mm</td>
<td>9.7 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foamtips™ #110</td>
<td>50 swabs</td>
<td>5.00&quot;</td>
<td>0.28&quot; x 0.13&quot;</td>
<td>1.00&quot;</td>
<td>0.82&quot;</td>
<td>polypropylene</td>
<td>100 ppi open cell foam</td>
</tr>
<tr>
<td>CF1050</td>
<td></td>
<td>12.7 cm</td>
<td>7.1 mm x 3.3 mm</td>
<td>25.4 mm</td>
<td>20.8 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foamtips™ #120</td>
<td>50 swabs</td>
<td>5.12&quot;</td>
<td>0.19&quot; x 0.13&quot;</td>
<td>1.00&quot;</td>
<td>0.46&quot;</td>
<td>polypropylene</td>
<td>100 ppi open cell foam</td>
</tr>
<tr>
<td>CF2050</td>
<td></td>
<td>13.0 cm</td>
<td>4.8 mm x 3.3 mm</td>
<td>25.4 mm</td>
<td>11.7 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foamtips™ #130</td>
<td>50 swabs</td>
<td>6.00&quot;</td>
<td>0.13&quot; x 0.13&quot;</td>
<td>0.75&quot;</td>
<td>0.25&quot;</td>
<td>polypropylene</td>
<td>100 ppi open cell foam</td>
</tr>
<tr>
<td>CF3050</td>
<td></td>
<td>15.2 cm</td>
<td>3.3 mm x 3.3 mm</td>
<td>19.1 mm</td>
<td>6.4 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foamtips™ #140</td>
<td>50 swabs</td>
<td>2.87&quot;</td>
<td>0.10&quot; x 0.10&quot;</td>
<td>0.50&quot;</td>
<td>0.19&quot;</td>
<td>polypropylene</td>
<td>100 ppi open cell foam</td>
</tr>
<tr>
<td>CF4050</td>
<td></td>
<td>7.3 cm</td>
<td>2.5 mm x 2.5 mm</td>
<td>12.7 mm</td>
<td>4.8 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**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

<table>
<thead>
<tr>
<th>Product</th>
<th>Pkg Count</th>
<th>Swab Length</th>
<th>Handle Width</th>
<th>Head Length</th>
<th>Head Width</th>
<th>Handle Material</th>
<th>Head Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flextips™</td>
<td>50 swabs</td>
<td>4.45&quot;</td>
<td>0.16&quot; x 0.16&quot;</td>
<td>0.81&quot;</td>
<td>0.25&quot;</td>
<td>nylon/polypropylene</td>
<td>100 ppi open cell foam</td>
</tr>
<tr>
<td>CX50</td>
<td></td>
<td>11.3 cm</td>
<td>4.1 mm x 4.1 mm</td>
<td>20.6 mm</td>
<td>6.4 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Flextips™</td>
<td>50 swabs</td>
<td>4.45&quot;</td>
<td>0.16&quot; x 0.16&quot;</td>
<td>0.81&quot;</td>
<td>0.25&quot;</td>
<td>nylon/polypropylene</td>
<td>100 ppi closed cell foam</td>
</tr>
<tr>
<td>SX50</td>
<td></td>
<td>11.3 cm</td>
<td>4.1 mm x 4.1 mm</td>
<td>20.6 mm</td>
<td>6.4 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flextips™ Mini</td>
<td>50 swabs</td>
<td>4.13&quot;</td>
<td>0.16&quot; x 0.16&quot;</td>
<td>0.53&quot;</td>
<td>0.19&quot;</td>
<td>nylon/polypropylene</td>
<td>100 ppi open cell foam</td>
</tr>
<tr>
<td>CXM50</td>
<td></td>
<td>10.5 cm</td>
<td>4.1 mm x 4.1 mm</td>
<td>13.5 mm</td>
<td>4.8 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super Flextips™ Mini</td>
<td>50 swabs</td>
<td>4.13&quot;</td>
<td>0.16&quot; x 0.16&quot;</td>
<td>0.53&quot;</td>
<td>0.19&quot;</td>
<td>nylon/polypropylene</td>
<td>100 ppi closed cell foam</td>
</tr>
<tr>
<td>SXM50</td>
<td></td>
<td>10.5 cm</td>
<td>4.1 mm x 4.1 mm</td>
<td>13.5 mm</td>
<td>4.8 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Product</th>
<th>Pkg Count</th>
<th>Swab Length</th>
<th>Handle Width</th>
<th>Head Length</th>
<th>Head Width</th>
<th>Handle Material</th>
<th>Head Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC50</td>
<td>50 swabs</td>
<td>3.25&quot;</td>
<td>0.38&quot; x 0.07&quot;</td>
<td>0.88&quot;</td>
<td>0.38&quot;</td>
<td>ABS</td>
<td>synthetic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.3 cm</td>
<td>9.7 mm x 1.8 mm</td>
<td>22.4 mm</td>
<td>9.7 mm</td>
<td>(acrylonitrile-butadiene-styrene)</td>
<td>chamois cloth</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Product</th>
<th>Pkg Count</th>
<th>Swab Length</th>
<th>Handle Width</th>
<th>Head Length</th>
<th>Head Width</th>
<th>Handle Material</th>
<th>Head Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM502</td>
<td>50 swabs</td>
<td>6.7&quot;</td>
<td>0.13&quot; x 0.13&quot;</td>
<td>0.62&quot;</td>
<td>0.08&quot;</td>
<td>polypropylene</td>
<td>polyvinylidene flouride</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.0 cm</td>
<td>3.3 mm x 3.3 mm</td>
<td>15.7 mm</td>
<td>1.93 mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**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

<table>
<thead>
<tr>
<th>Product</th>
<th>Pkg Count</th>
<th>Swab Length</th>
<th>Handle Width</th>
<th>Head Length</th>
<th>Head Width</th>
<th>Handle Material</th>
<th>Head Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cottontips™ Single-Head</td>
<td>CT100</td>
<td>100 swabs</td>
<td>6.00&quot;</td>
<td>0.08&quot; x 0.08&quot;</td>
<td>0.63&quot;</td>
<td>0.19&quot;</td>
<td>wood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15.2 cm</td>
<td>2.0 mm x 2.0 mm</td>
<td>16 mm</td>
<td>4.8 mm</td>
<td></td>
</tr>
<tr>
<td>Cottontips™ Double-Head</td>
<td>CT200</td>
<td>100 swabs</td>
<td>6.00&quot;</td>
<td>0.08&quot; x 0.08&quot;</td>
<td>0.63&quot;</td>
<td>0.19&quot;</td>
<td>wood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15.2 cm</td>
<td>2.0 mm x 2.0 mm</td>
<td>16 mm</td>
<td>4.8 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CT2000</td>
<td>1000 swabs</td>
<td>6.00&quot;</td>
<td>0.08&quot; x 0.08&quot;</td>
<td>0.63&quot;</td>
<td>0.19&quot;</td>
<td>wood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15.2 cm</td>
<td>2.0 mm x 2.0 mm</td>
<td>16 mm</td>
<td>4.8 mm</td>
<td></td>
</tr>
<tr>
<td>Cottontips™ Low Lint</td>
<td>CT5000</td>
<td>1000 swabs</td>
<td>6.00&quot;</td>
<td>0.08&quot; x 0.08&quot;</td>
<td>0.63&quot;</td>
<td>0.19&quot;</td>
<td>wood</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15.2 cm</td>
<td>2.0 mm x 2.0 mm</td>
<td>16 mm</td>
<td>4.8 mm</td>
<td></td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Product</th>
<th>Pkg Count</th>
<th>Swab Length</th>
<th>Handle Width</th>
<th>Head Length</th>
<th>Head Width</th>
<th>Handle Material</th>
<th>Head Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cottontips™ MicroPoint</td>
<td>CCT2425</td>
<td>25 swabs</td>
<td>3.0&quot;</td>
<td>0.06&quot; x 0.06&quot;</td>
<td>0.47&quot;</td>
<td>0.12&quot;</td>
<td>Paper composite</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7.6 cm</td>
<td>1.5 mm x 1.5 mm</td>
<td>11.9 mm</td>
<td>3.0 mm</td>
<td></td>
</tr>
<tr>
<td>Part Number</td>
<td>Product Name</td>
<td>Page</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>--------------</td>
<td>------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0793-00-103-94902</td>
<td>ES1668 Plast-N-Glas®</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3439-00-009-2334</td>
<td>7-5L Chem-Wik® Resin</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3439-01-009-6448</td>
<td>80-5 Soder-Wick®</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3439-01-198-9716</td>
<td>80-4-10 Soder-Wick®</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3439-01-324-8208</td>
<td>80-2-5 Soder-Wick®</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3439-01-371-1588</td>
<td>10-5L Chem-Wik®</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>416850-01-514-1372</td>
<td>CW3500 CircuitWorks® Conformal Coating Remover Pen</td>
<td>23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4820-01-314-3601</td>
<td>ES710V Chrome Trigger Valve</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5836-01-453-8942</td>
<td>OC50 Chamois Tips™</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5836-01-454-0401</td>
<td>ES605L IPA</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5836-01-454-0402</td>
<td>CP600 Chempad™</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6616-00-077-3218</td>
<td>OF6050 Foamtipp® #140</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6830-01-381-2675</td>
<td>ES1020 Ultrajet® System</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-00-002-2347</td>
<td>ES1217 Duster</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-224-9211</td>
<td>ES2400 Tun-O-Wash®</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-3064</td>
<td>D920 Opticwipes™</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-393-9054</td>
<td>ES1210 Electro-Wash® PX</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-412-0040</td>
<td>ES1020 Ultrajet® Refill</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-418-0499</td>
<td>ES1035 Flux-Off® Heavy Duty</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-446-4573</td>
<td>ES2000 Pow-R-Wash® CZ</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-446-4578</td>
<td>ES2000 Flux-Off® CZ</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-446-4584</td>
<td>ES7100 Electro-Wash® CZ</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-446-4573</td>
<td>ES835B Flux-Off® Rosin</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-463-8043</td>
<td>ES1017 Duster</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-463-8043</td>
<td>ES1217 Duster</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-475-0987</td>
<td>CW8100 No Clean Flux Dispensing Pen</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-484-3064</td>
<td>CP610 Optic Prep™</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-506-5662</td>
<td>CW2200MTP Conductive Pen</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6850-01-566-5804</td>
<td>ES1051 Freez-It® Antistat</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7045-01-535-0276</td>
<td>CMS50 Microtips™</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7045-01-548-4968</td>
<td>CT5000 Cottontips™ Low Limit</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7090-01-467-3289</td>
<td>CF500 Foamtipp® Pro</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7090-01-559-5328</td>
<td>CP421 Electro-Wash® MX Presaturated Wipe</td>
<td>5, 29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8030-01-511-6308</td>
<td>CW3300C CircuitWorks® Overcoat Pen</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8510-01-358-8838</td>
<td>C805 Static-Free™ Hand Guard™</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9150-01-508-9999</td>
<td>CW7100 Conductive Grease</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9390-01-552-1552</td>
<td>ES1668T Static-Free™ Mat and Benchtop Reconditioner</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part #</td>
<td>Page</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-5L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-25L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-50L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-100L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-5L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-25L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-50L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-100L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-500L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-5L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-25L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-50L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-100L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-500L</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-5L</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-25L</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-50L</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-100L</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-500L</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-1-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-2-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-2-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-3-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-3-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-4-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-4-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-1-25</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-2-25</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-2-100</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-2-500</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-3-25</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-3-100</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-4-25</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-4-100</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-5-25</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-6-25</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-1-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-1-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-2-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-2-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-3-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-3-100</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-4-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-4-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-5-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-5-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-5-25</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-6-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-6-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-7-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-8-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-8-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-8-25</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-9-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-9-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-10-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-10-10</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-11-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-12-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-13-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-14-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-15-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-16-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-17-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-18-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-19-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-20-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-21-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-22-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-23-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-24-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-25-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-26-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-27-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-28-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-29-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-30-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-31-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-32-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-33-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-34-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-35-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-36-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-37-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-38-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-39-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-40-5</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The information contained herein is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. Chemtronics does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.

UltraJet, Electro-Wash, Kontact Restorer, Tuner Renu, DPL, Flux-Off, Soder-Wick, Chem-Wik, CircuitWorks, Freeze-It, Konform, Chemask, Plast-N-Glas, Tun-O-Wash, QbE and Chemtronics are registered trademarks of Chemtronics. All rights reserved.

Verizane, Circonzane, Pow-R-Wash, Gold Guard, VacuPak, PermaPak, The Mighty Pen, Max-Kleen, Xtreme, Lectro-Solv, Static Free, Head Cleaner, Controlwipes, Oxon, Chemswab, Screen Prep, optic Prepar, Chempad, StencilWax, Chemask Tips, Microtips, Foamtips, Flex tips, Gomptips, Coventry, Lluma-Prime, PiLow-Tip, Diamond, Econowipes, Cleanroom Chamois, Soft, HD Silicone, Mighty-Wash, FS9L, Fibernow, Fiber-Wash and Focus are trademarks of Chemtronics. All rights reserved.

DuPont™ and Vertrel® are trademarks or registered trademarks of E. I. duPont de Nemours and Company. All other trademarks herein are trademarks or registered trademarks of their respective owners.
Chemtronics combines over 30-years' experience developing high precision cleaners and conformal coatings, giving us a unique perspective of these interrelated processes.

Chemtronics Application Lab offers a state-of-the-art cleaning, coating and analytical services to help customers optimize their processes. Cleaning equipment includes inline, batch, ultrasonic, and vapor degreasing systems. This equipment allows us to better duplicate your production environment for process optimization and troubleshooting.

Services Include:

• Verify cleaning and coating materials meet customer, industry and regulatory requirements
• Optimize cleaning process
• Troubleshoot cleaning and/or coating problems
• Identify most effective cleaner for specific application
• Compatibility testing for sensitive materials

Free Qualification Testing
Call us today to help qualify new cleaning processes, evaluate current processes, or troubleshoot contamination issues.

Visit www.chemtronics.com for the very latest product information, specs, TDS, SDS, COC, videos & more!