ELECTRONICS MAINTENANCE

DUSTERS
COLD SPRAYS
ELECTRONICS CLEANERS
FLUX REMOVERS
CONTACT CLEANERS
SPECIALTY CLEANERS
WIPES
SWABS
BRUSHES
WHAT IS MG CHEMICALS?

MG Chemicals is a manufacturer and wholesaler of chemical products for the electronics industry. Our chemical products include dusters and circuit coolers, electronic cleaners, flux removers, contact cleaners, protective coatings, epoxies, adhesives, RTV silicones, lubricants, EMI/RFI shielding coatings, thermal management products, prototyping supplies, solders and more. We also distribute related non-chemical products such as wipes, swabs, brushes, desoldering braids, copper-clad boards and 3D printing filaments.

MG SERVICE

MG Chemicals understands that setting up production involves multiple challenges. Our service team has years of experience in production and equipment use, and understands the various technical issues you may encounter during planning, pilot studies and production runs. To overcome these challenges, we offer the following professional services.

MG Chemicals can

- Provide advice on equipment and materials
- Assist with setup and troubleshooting
- Review your proposed application processes
- Suggest ways of optimizing and customizing processes to best meet your needs
- Offer training on the proper use of our products

Quality Assurance

Since 1955, MG Chemicals has provided the North American electronics industry with a full line of high performance chemicals and accessories. The MG Chemicals manufacturing facility operates under the ISO 9001 Quality System Standard. All products undergo MG Chemicals’ design process, including the testing and analysis of each product to maximize performance, user safety, environmental safeguards and market desirability.

Customer Care

Customer care is what separates MG Chemicals from the rest. Our commitment to all of these principles focuses on getting you the quality product and support you deserve.
# TABLE OF CONTENTS

## DUSTERS
- Super Duster™ 134 4
- Super Duster™ 152 4
- Super Duster™ 134 Refill 5
- Chrome Trigger Valve 5

## COLD SPRAYS
- SuperCold™ 134 5

## ELECTRONICS CLEANERS
- Isopropyl Alcohol (Liquid) 6
- Isopropyl Alcohol (Aerosol) 6
- D-Limonene Industrial Strength 7
- Acetone (liquid) 7
- Safety Wash™ (Liquid) 7
- Safety Wash II™ (Aerosol) 8
- Super Wash™ (Aerosol) 8
- HFE Solvent (Aerosol) 9
- Super HFE Electronics Cleaner (Aerosol) 9
- Electronics Cleaners - Liquid Comparison Chart 10
- Electronics Cleaners - Aerosol Comparison Chart 10

## FLUX REMOVERS
- Flux Remover for PC Boards 11
- Heavy Duty Flux Remover 11

## CONTACT CLEANERS
- Nu-Trol™ Control Cleaner 12
- Contact Cleaner with Silicones 12
- Electrosolve™ Contact Cleaner 13
- Super Contact Cleaner with PPE 13

## SPECIALTY CLEANERS
- Audio / Video Head Cleaner 14
- Rubber Renue™ 14
- Label & Adhesive Remover 14
- Glass Cleaner 15
- Static OFF™ Antistatic Foaming Spray 15
- Conformal Coatings Remover - Liquid 15
- Conformal Coatings Remover - Gel 15

## PRE-SATURATED WIPES
- Clean Pad 16
- Optical Wipe 16
- Multi-Purpose Alcohol Wipes Tub 17
- Isopropyl Alcohol Wipes 17
- LCD Screen Cleaning Kit 18
- LCD Cleaning Wipes (Single Pack) 18

## DRY WIPES
- OptiWipes 19
- Hydrowipes 19
- Twillwipes 19

## SWABS
- Double-Headed Cotton Swabs 20
- Tapered Cotton Swabs 20
- Chamois Swabs 20
- Foam Swabs 21
- Foam Over Cotton Swabs 21
- Rectangular Foam Swabs 21
- Anti-Static Foam Over Cotton 21

## BRUSHES
- Stainless Steel Cleaning Brush 22
- Hog Hair Cleaning Brush 22
- Brass Cleaning Brush 22
- Large Hog Hair Cleaning Brush 22
- Horse Hair Cleaning Brush 23
- Chisel Hog Hair Cleaning Brush 23
- Double Horse Hair Cleaning Brush 23
- Horse Hair Cleaning Brush 23
DUSTERS

MG Chemicals dusters are formulated to deliver a high rate of compressed gas to safely and effectively remove microscopic dust, lint and foreign particles from computers, keyboards, office equipment, electrical equipment, telecommunications devices, A/V equipment, laboratory instruments, medical devices, photographic equipment, and electronic instruments. They are suitable for use in labs, on work benches, in maintenance and for service shops, off-site servicing, residential homes, offices, and industry.

Super Duster™ 134
Super Duster™ 134 is a pressurized gas duster made with 100% HFC134A gas. Its powerful blast blows away microscopic dust, lint and foreign particles. Good for home or office, it is non-flammable and non-conductive, so it can be used on live circuits or in industrial environments.

• 100% HFC 134A gas
• Non-Flammable
• Non-Conductive
• High flow delivery system
• Ozone safe
• VOC free
• Zero residue
• Moisture free
• Safe on plastics
• Filtered to 0.2 microns
• CARB compliant when used on energized circuits

Super Duster™ 152
Super Duster™ 152 is a pressurized gas duster made with 100% HFC152A gas. Its powerful blast blows away microscopic dust, lint and foreign particles. Recommended for use in home or office over 402A.

• 100% HFC 152A gas
• Economical
• Ozone safe
• Non-VOC
• Non-flammable aerosol*
• Zero residue
• High flow delivery system
• Food safe – Registered with CFIA and NSF
• Filtered to 0.2 microns
• CARB Compliant

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Format</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>402A-285G</td>
<td>236 mL</td>
<td>285 g</td>
<td>Aerosol</td>
<td>Spray can</td>
</tr>
<tr>
<td>402A-450G</td>
<td>373 mL</td>
<td>450 g</td>
<td>Aerosol</td>
<td>Spray can</td>
</tr>
</tbody>
</table>

*While this aerosol is classified as non-flammable according to Canadian and American criteria, the liquid form is flammable. Do not use this product in presence of flames or on a live circuit. (Note: the liquid form can be ejected if the aerosol can is not held upright during use.)
SuperDuster™ 134 Refill
A Super Duster™ 134 refill container for use with our Super Duster Trigger Valve.

Super Duster™ 134 is a pressurized gas duster made with 100% HFC 134A gas. Its powerful blast blows away microscopic dust, lint, and foreign particles. Good for use in home or office, it is non-flammable and non-conductive, so it is suitable for use on live circuits or in industrial environments.

- 100% HFC 134A gas
- Non-Flammable
- Non-Conductive
- High flow delivery system
- Ozone safe
- VOC free
- Zero residue
- Moisture free
- Safe on plastics
- Filtered to 0.2 Microns
- CARB compliant when used on energized circuits

Chrome Trigger Valve
This high quality threaded chrome valve greatly increases the comfort for high volume users, who might find the regular plastic trigger irritating after prolonged use. It also provides improved accuracy and better control over the rate of flow than plastic triggers.

This product can be used over and over. It simply screws onto the top of the can, and may be removed at any time without damage to the valve, can, or itself.

- Greatly improved comfort
- Improved precision
- ESD Safe
- Better control of flow
- Can be used over and over

SuperCold™ 134
MG Chemicals’ cold spray is 100% HFC 134A non-flammable gas. It is primarily used for diagnosing thermally intermittent problems with electronic devices, but it is also useful for protecting heat sensitive components during soldering, quickly cooling solder joints. As an added benefit, the spray will also freeze gum, glues and adhesives for easier removal. This product is registered with the CFIA and the NSF for use in and around food processing establishments.

- 100% HFC 134A gas
- Chills down to -51 °C (-60 °F)
- Ozone safe
- Non-flammable
- Non-conductive
- Zero residue
- VOC exempt
- Registered with NSF for use in and around food processing establishments

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>402AR-285G</td>
<td>236 mL</td>
<td>285 g</td>
<td>Aerosol</td>
<td>Spray can</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Format</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>402T</td>
<td>2.0 mm +/- 0.1</td>
<td>93 mm</td>
<td>Clam shell</td>
<td></td>
</tr>
</tbody>
</table>
MG Chemicals offers a wide variety of solutions for the effective cleaning of sensitive electronics components.

### Isopropyl Alcohol (Liquid)
A great all-purpose cleaner for a wide range of electronics applications. Made of 99.95% minimum purity anhydrous alcohol (“IPA”). It is safe on plastics and has a moderate evaporation rate.

- Plastic safe
- Moderate evaporation rate
- Zero residue
- Registered with NSF for use in and around food processing establishments (CFIA exempt)
- CARB compliant

### Isopropyl Alcohol (Aerosol)
99.95% pure isopropyl alcohol (“IPA”) in an aerosol can with pure HFC 152A propellant. An economical electronics cleaner and flux remover suitable for a wide variety of cleaning applications in electronics. It is safe on plastics and has a moderate evaporation rate.

- Dissolves light oils and residues
- Zero residue
- Moderate evaporation rate
- Safe on plastics
- Effective flux remover
- Variable valve allows user to control the rate of flow
- CARB compliant
- Registered with NSF for use in and around food processing establishments

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>824-100ML</td>
<td>125 mL</td>
<td>98 g</td>
<td>Liquid</td>
<td>Bottle</td>
</tr>
<tr>
<td>824-500ML</td>
<td>475 mL</td>
<td>373 g</td>
<td>Liquid</td>
<td>Pump</td>
</tr>
<tr>
<td>824-1L</td>
<td>945 mL</td>
<td>742 g</td>
<td>Liquid</td>
<td>Bottle</td>
</tr>
<tr>
<td>824-4L</td>
<td>4 L</td>
<td>3.14 kg</td>
<td>Liquid</td>
<td>Jug</td>
</tr>
<tr>
<td>824-20L</td>
<td>20 L</td>
<td>15.7 kg</td>
<td>Liquid</td>
<td>Pail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>824-450G</td>
<td>553 mL</td>
<td>450 g</td>
<td>Aerosol</td>
<td>Spray can</td>
</tr>
</tbody>
</table>

*Users in California, and other states duplicating the California Air Resource Board’s Consumer Product’s Program, must dilute this product 25% by mass with either water or acetone before use.*
D-Limonene Industrial Strength

D-Limonene Industrial Strength is a colorless liquid made from 100% natural citrus oils. It is excellent for use in cleaning and degreasing, removing adhesives and tar, floor cleaning, and removing graffiti.

- Dissolves heavy oils and greases
- Dissolves gums and sticky residues
- Safe on most plastics
- Safe on most enamel paints and acrylic coatings
- Can be used to dissolve HIPS in 3D printing applications
- Pleasant citrus odor

Safety Wash™ (Liquid)

Safety Wash™ is a liquid all-purpose electronics cleaner made from high purity ethyl alcohol, isopropanol, and a touch of ethyl acetate. It is safe on plastics and effectively dissolves oils, inks and flux residues.

- For use with de-energized electronic components and equipment
- Printed circuit boards
- Fiber optic connectors
- Electrical assemblies
- Relays
- Semi-conductors
- Cold dip and rinsing

Acetone

Acetone is a pure solvent with an endless variety of applications. It is a very aggressive solvent, dries extremely quickly, and leaves zero residue. Also, it is exempt from VOC regulations in most jurisdictions. It is highly flammable, so appropriate precautions are required before use.

Acetone has many uses specific to electronics. It may be used as a cleaner or stripper. It aggressively dissolves heavy greases and stubborn residues, quickly stripping coatings, and even eventually destroying most encapsulating and potting compounds. It may be used as a thinner for fast dry coatings, or as a multi-purpose solvent, and in 3D printing it is useful for smoothing ABS.

- Removes stubborn contaminants
- Very fast evaporation rate
- Highly miscible with other solvents
- Leaves no residues
- VOC Free
- Low toxicity

---

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>433C-1L</td>
<td>945 mL</td>
<td>799 g</td>
<td>Liquid</td>
<td>Can</td>
</tr>
<tr>
<td>433C-4L</td>
<td>3.78 L</td>
<td>3.19 kg</td>
<td>Liquid</td>
<td>Can</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050-1L</td>
<td>1 L</td>
<td>787 g</td>
<td>Liquid</td>
<td>Bottle</td>
</tr>
<tr>
<td>4050-4L</td>
<td>4 L</td>
<td>3.15 kg</td>
<td>Liquid</td>
<td>Jug</td>
</tr>
<tr>
<td>4050-20L</td>
<td>20 L</td>
<td>15.7 kg</td>
<td>Liquid</td>
<td>Pail</td>
</tr>
</tbody>
</table>
### Safety Wash II™ (Aerosol)

Safety Wash II blends three plastic-safe cleaning solvents, denatured ethanol, isopropyl alcohol, and isohexanes, together with a VOC-free propellant. Combining the polar cleaning action of the two alcohols with the non-polar cleaning action of the isohexanes, this formula is ready to take on most oils, greases and other residues in a sensitive electronics environment. It is also an excellent flux remover.

- Dissolves light oils and residues on electronic devices and equipment
- Combines polar and non-polar solvent cleaning action
- Zero residue
- Safe on plastics
- Methanol free
- Variable valve allows user to control the rate of flow
- CARB Compliant
- Registered with NSF for use in and around food processing establishments

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>4050A-450G</td>
<td>535 mL</td>
<td>18 fl oz</td>
<td>450 g</td>
<td>Aerosol</td>
</tr>
</tbody>
</table>

---

### Super Wash™ (Aerosol)

Super Wash is a very fast drying electronics cleaner perfect for post-production clean up. It quickly dissolves fingerprints, oils, inks and organic residues, then it evaporates rapidly, so the cleaned board is immediately ready for packaging. It is also an excellent rinsing agent for removing slower-drying solvents and dissolved residues after immersion cleaning, or in the second step of a two-step flux removal process (dissolve / rinse).

- Very fast evaporation
- Safe on plastics
- Zero residue
- Non-conductive
- Variable valve allows user to control rate of flow
- Flammable - do not use on live circuits
- CARB Compliant*
- Registered with NSF for use in and around food processing establishments

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>406B-425G</td>
<td>590 mL</td>
<td>20.0 fl oz</td>
<td>425 g</td>
<td>Aerosol</td>
</tr>
</tbody>
</table>
HFE Solvent (Aerosol)

100% pure HFE 7100 together with pure 134A HFC propellant. Absolutely non-flammable, non-conductive, plastic-safe, and non-toxic.

Unlike many other non-flammable electronic cleaners, MG Chemicals HFE Solvent is not an azeotropic blend. It is a 100% pure HFE 7100 solvent. Azeotropic blends commonly risk becoming flammable over time because the evaporation rates of the various ingredients are close, but not exactly the same, so flammable constituents are eventually exposed. Also, they are not always 100% safe on plastics, because of solvents added to increase cleaning power. With HFE Solvent, neither of those risks exist.

Super HFE Electronics Cleaner (Aerosol)

A high-strength, fast dry, non-flammable aerosol cleaner. Combining polar and non-polar solvents, it is effective on a wide range of residues. Use for removing oils, greases, and flux residues from printed circuit boards and other electronics applications. It is also suitable for electrical and industrial use.

- Can be used on energized circuits
- Non-flammable
- Non-conductive
- Plastic safe
- Fast evaporation rate
- Zero residue
- Non-toxic
- VOC Free
- Approved by SNAP without restrictions
- CARB Compliant*
- Registered with NSF for use in and around food processing establishment

- Non-flammable aerosol
- Excellent cleaning strength
- Zero residue
- Fast dry
- Polar and non-polar cleaning
- Excellent flux remover
- Safe on many plastics – check compatibility before use
- CARB Compliant*

This Product passes the flame extension test for non-flammable aerosols. However, if the product drips, puddled liquid residues will quickly become momentarily flammable as the constituent solvents will evaporate at slightly different rates.

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>411-300G</td>
<td>250 mL</td>
<td>8.48 fl oz</td>
<td>300 g</td>
<td>Aerosol</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Spray can</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>4120-450G</td>
<td>360 mL</td>
<td>12.1 fl oz</td>
<td>450 g</td>
<td>Aerosol</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Spray can</td>
</tr>
</tbody>
</table>
# Electronics Cleaners - Liquid Comparison Chart

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>824</th>
<th>8241</th>
<th>4050</th>
<th>434</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cleaning Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLASTIC SAFE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>FLAMMABLE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>STRENGTH</td>
<td>Regular</td>
<td>Regular</td>
<td>Regular</td>
<td>Extra</td>
</tr>
<tr>
<td>EVAPORATION</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Fast</td>
</tr>
<tr>
<td><strong>Regulatory Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSF COMPLIANT</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>VOC FREE</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Physical Properties</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLASH POINT</td>
<td>12 °C / 54°F</td>
<td>-18 °C / 65°F</td>
<td>13 °C / 55°F</td>
<td>-17 °C / 1.4°F</td>
</tr>
<tr>
<td>BOILING POINT</td>
<td>81.8 °C / 179°F</td>
<td>81 °C / 177 °F</td>
<td>78 °C / 174 °F</td>
<td>56 °C / 133 °F</td>
</tr>
<tr>
<td><strong>Contaminants Cleaning Efficiency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NON-POLAR RESIDUES</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>POLAR RESIDUES</td>
<td>Fair</td>
<td>Good</td>
<td>Fair</td>
<td>Fair</td>
</tr>
<tr>
<td>IONIC RESIDUES</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>FLUX RESIDUES</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>OILS</td>
<td>Good</td>
<td>Fair</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>GREASES</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Excellent</td>
</tr>
<tr>
<td>INKS</td>
<td>Fair</td>
<td>Fair</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>DIRT &amp; GRIMES</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
<td>Fair</td>
</tr>
</tbody>
</table>

# Electronics Cleaners - Aerosol Comparison Chart

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>824</th>
<th>4050A</th>
<th>406B</th>
<th>411</th>
<th>4120</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cleaning Characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLASTIC SAFE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Test</td>
</tr>
<tr>
<td>FLAMMABLE</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>STRENGTH</td>
<td>Regular</td>
<td>Enhanced</td>
<td>Extra</td>
<td>Low</td>
<td>Extra</td>
</tr>
<tr>
<td>EVAPORATION</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Fast</td>
<td>Fast</td>
<td>Fast</td>
</tr>
<tr>
<td><strong>Regulatory Status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSF COMPLIANT</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>VOC FREE</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Physical Properties</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLASH POINT</td>
<td>12 °C / 54°F</td>
<td>-29 °C / -20 °F</td>
<td>-29 °C / -20 °F</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>BOILING POINT</td>
<td>81.8 °C / 179 °F</td>
<td>50 °C / 121 °F</td>
<td>50 °C / 121 °F</td>
<td>60 °C / 140 °F</td>
<td>40 °C / 104 °F</td>
</tr>
<tr>
<td><strong>Contaminants Cleaning Efficiency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NON-POLAR RESIDUES</td>
<td>Fair</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
<td>Good</td>
</tr>
<tr>
<td>POLAR RESIDUES</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Good</td>
</tr>
<tr>
<td>IONIC RESIDUES</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Excellent</td>
</tr>
<tr>
<td>FLUX RESIDUES</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Excellent</td>
</tr>
<tr>
<td>OILS</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Good</td>
</tr>
<tr>
<td>GREASES</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Excellent</td>
</tr>
<tr>
<td>INKS</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Good</td>
</tr>
<tr>
<td>DIRT &amp; GRIMES</td>
<td>Good</td>
<td>Good</td>
<td>Poor</td>
<td>Poor</td>
<td>Excellent</td>
</tr>
</tbody>
</table>
MG Chemicals line of flux removers provide two choices for dissolving and rinsing flux residue: one safe on plastics formula for general flux removal, and an aggressive alternative for removing difficult baked-on flux.

Flux Remover for PC Boards is plastic-safe and designed for general applications. It is effective both at dissolving flux and rinsing dissolved residues from boards.

Heavy Duty Flux Remover is very aggressive. It dissolves the most stubbornly burnt-on flux; however, it is not plastic safe, and therefore it is best used on the solder side of boards or for careful spot removal on populated boards.

Flux removal is a two-step process. Step one is dissolving the flux, and step two is rinsing the dissolved flux off of the board, so it does not redeposit as white residue. Either of our flux removers can rinse as well as dissolve flux; however, our 406B Super Wash™ makes an extra-effective rinsing agent, because it is very fast drying and plastic-safe. It will quickly remove both the slower-drying flux remover and the dissolved flux, producing a clean, dry board in seconds, resulting in an effective flux removal process.

Our flux removers come in both convenient aerosol and liquid formats, and are suitable for maintenance and repair operations, service centers, prototyping, maker projects, and small scale electronics production.

**Flux Remover for PC Boards**

A plastic-safe general purpose flux remover. It is zero residue, with a modest dry time, and effective at dissolving and rinsing most flux residues. It is offered in both aerosol and liquid formats.

- Safe on plastics
- Moderate evaporation
- RoHS Compliant
- Low odor
- Zero residue
- Aerosol container variable valve allows user to control rate of flow

**Heavy Duty Flux Remover**

MG Chemicals heavy duty flux remover is specially formulated to efficiently remove the most stubborn, encrusted, hard, baked-on flux residues, especially those from high temperature lead-free processes. It is not plastic-safe, so its use on the populated side of the board should be restricted to careful spot cleaning, but it can be freely used on the solder side, providing a fast, effective cleaning process.

- Extra strength
- Quickly dissolves burnt on flux
- Fast evaporation
- Offered in liquid and aerosol formats
- Aerosol variable valve allows user to control rate of flow
- CARB compliant* (Aerosol format**)
MG Chemicals contact cleaners are formulated to clean, lubricate, protect, restore and prolong the conductivity and performance of electronics contacts. They restore damaged parts and prevent deterioration, caused by a wide variety of contaminants, corrosion and wear and tear, ensuring permanent and reliable connectivity.

**Nu-Trol™ Control Cleaner**

Nu-Trol’s unique blend of high purity solvents and a lubricating mineral oil is excellent for cleaning and lubricating delicate moving parts in electronics, such as controls, potentiometers, dials, switches, tuners and servomechanisms. It is also good for general purpose cleaning and lubrication of moving parts for locks, hinges and power tools.

- Contains electronic grade mineral oil
- Safe on plastics
- Moderate evaporation rate
- Non-aggressive - safe for use on vintage electronics
- Variable valve allows user to control the rate of flow

**Contact Cleaner with Silicones**

This is a general purpose contact cleaner for applications requiring lubrication. It is a fast-drying, plastic-safe solvent cleaner that leaves behind a thin film of dry electronics-grade silicone.

The solvent system effectively dissolves oil and organic residues, and assists the removal of oxidation with a brush. Also, it is fast evaporating, so serviced devices can quickly be returned to use.

The silicone provides lubrication, preventing wear and tear, as well as a layer of protection from oxidation and the elements. It is very thermally stable. It will not significantly dry out over time and has a maximum service temperature of 200 °C (392 °F). It is non-conductive, so shorts are not a concern, yet it goes on so thin that it does not significantly inhibit electrical connections. In addition, the dry lubrication makes it better for dusty environments than mineral oil alternatives.

This product is useful in a variety of electronics applications such as contacts, connectors, jacks, switches, and battery terminals. It is also useful for lubricating delicate sliding metal parts, such as telescoping antennas.

- Very fast-dry cleaner
- Dry silicone lubrication
- Safe on plastics
- Reduces wear and abrasion
- Protects from oxidation
- Maximum service temperature 200°C (392 °F)
- Variable valve allows user to control the rate of flow
- Registered with NSF for use in and around food processing establishments.

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>401B-140G</td>
<td>188 mL</td>
<td>6.35 fl oz</td>
<td>140 g</td>
<td>Aerosol</td>
</tr>
<tr>
<td>401B-340G</td>
<td>457 mL</td>
<td>15.4 fl oz</td>
<td>340 g</td>
<td>Aerosol</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>404B-140G</td>
<td>188 mL</td>
<td>6.35 fl oz</td>
<td>140 g</td>
<td>Aerosol</td>
</tr>
<tr>
<td>404B-340G</td>
<td>457 mL</td>
<td>15.4 fl oz</td>
<td>340 g</td>
<td>Aerosol</td>
</tr>
</tbody>
</table>
Electrosolve™ Contact Cleaner

A plastic-safe, fast-dry, zero residue general purpose contact cleaner for applications where lubrication is not desired. It is effective at dissolving oils and non-polar residues, and for assisting with the removal of oxidation using a brush.

Super Contact Cleaner with PPE / Super Contact Cleaner Pen

A contact cleaner that cleans, lubricates and protects. It contains a slow-drying plastic-safe solvent that removes stubborn residues, an electronic grade mineral oil for lubrication, and Polyphenyl Ether (“PPE”) for enhanced conductivity and long term protection from oxidation. PPE bonds onto the surface of metals, enhancing conductivity and preventing oxidation, and is particularly effective on gold, protecting gold contacts permanently. Available in aerosol or convenient pen format

For use on contacts, connectors, jacks, potentiometers, tuners, switches, battery terminals, and many more electronics applications.

- Safe on plastics
- Zero Residue
- Very fast evaporation
- Variable valve allows user to control rate of flow
- Registered with NSF for use in and around food processing establishments

---

**Electrosolve™ Contact Cleaner**

- Safe on plastics
- Zero Residue
- Very fast evaporation
- Variable valve allows user to control rate of flow
- Registered with NSF for use in and around food processing establishments

**Super Contact Cleaner with PPE / Super Contact Cleaner Pen**

- Plastic-safe
- Improves conductivity
- Reduces connection, wear, and abrasion failures
- Protects from oxidation
- Protects gold contacts for life
- Variable valve allows user to control rate of flow
- Also available in pen format (801C-P)

---

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>409B-140G</td>
<td>188 mL</td>
<td>140 g</td>
<td>Aerosol</td>
<td>Spray can</td>
</tr>
<tr>
<td>409B-340G</td>
<td>457 mL</td>
<td>340 g</td>
<td>Aerosol</td>
<td>Spray can</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>801B-125G</td>
<td>155 mL</td>
<td>125 g</td>
<td>Aerosol</td>
<td>Spray can</td>
</tr>
<tr>
<td>801C-P</td>
<td>10 mL</td>
<td>7.7 g</td>
<td>Aerosol</td>
<td>Spray can</td>
</tr>
</tbody>
</table>
MG Chemicals formulates a number of specialty cleaners for the electronics maintenance industry.

**Audio Video Head Cleaner**

MG Chemicals Audio/Video Head Cleaner was designed and tested to provide optimal cleaning power while remaining safe for your equipment. Use for cleaning and restoring sensitive magnetic and optical read/write heads.

- Safe on plastics
- Removes static and hiss
- Static free
- Zero residue

**Rubber Renue™**

Rubber Renue restores old rubber parts that have become hard and lost their tackiness and flexibility. First, it causes the rubber part to swell, allowing dirt to come out of its pores. Later, the solvent dries and the rubber returns to form, but tacky again, so rollers and platens have their grip back. It is great for returning flexibility to rubber belts. This product utilizes strong solvents and is not for general use in home or office. It is intended for use in professional maintenance and repair operations. Use only in well ventilated areas.

- Rejuvenates old dry hard rubber
- Restores tackiness
- Restores flexibility and elasticity
- 408A is CARB compliant* when diluted 25% with acetone
- 408B is CARB compliant**(pre-diluted)

**Label and Adhesive Remover**

MG Chemicals Label and Adhesive Remover effectively removes labels, adhesives, and residues without damaging plastics, paints, or coatings. For paper labels, simply spray on, wait a few minutes, then pull off the label and wipe the residue clean. For laminated labels, scrape off the lamination, spray product on surface, wait a few minutes, then pull off the remaining paper label and wipe the residue clean.

- Efficiently removes labels
- Cleans sticky residues
- Plastic safe
- Safe on most paints and coatings
- CARB Compliant
- Registered with NSF for use in and around food processing establishments.

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>407C-250ML</td>
<td>250 mL</td>
<td>8.45 fl oz</td>
<td>Liquid</td>
<td>Bottle</td>
</tr>
</tbody>
</table>

- Cat. Number: 407C-250ML
  - Net Volume: 250 mL
  - Net Weight: 8.45 fl oz
  - Form: Liquid
  - Packaging: Bottle

- Cat. Number: 408A-125ML
  - Net Volume: 125 mL
  - Net Weight: 4.22 fl oz
  - Form: Liquid
  - Packaging: Bottle

- Cat. Number: 8361-140G
  - Net Volume: 157 mL
  - Net Weight: 5.3 fl oz
  - Form: Aerosol
  - Packaging: Bottle

- Cat. Number: 8361A-P
  - Net Volume: 10 mL
  - Net Weight: 0.3 fl oz
  - Form: Liquid
  - Packaging: Can

- Cat. Number: 408A-125ML
  - Net Volume: 125 mL
  - Net Weight: 4.22 fl oz
  - Form: Liquid
  - Packaging: Bottle

- Cat. Number: 408B-1L
  - Net Volume: 945 mL
  - Net Weight: 1 qt
  - Form: Liquid
  - Packaging: Can

*Users in California, and other states duplicating the California Air Resource Board’s Consumer Product’s Program, must dilute this product 25% by mass with either water or acetone before use.

**CARB Category and Limit: Electronics Cleaner, 75%
Glass Cleaner
An all-purpose, non-streaking and high-foaming action glass cleaner. It can be used safely on plastic, vinyl, metal, glass, chrome and ceramics, leaving surfaces bright and clean.

- Safe on plastics
- Non-streaking
- Foaming – sticks to vertical surfaces
- Variable valve allows user to control rate of flow
- Registered with NSF for use in and around food processing establishments.

>Nonfood Compounds Prog am Listed K2 Registration #141798<

Static OFF™ Antistatic Foaming Spray
MG Chemicals’ advanced non-drip Static Off™ Antistatic Foaming Spray effectively eliminates static charges with a single application. Static Off™ is safe on all surfaces and gives you a streak-free finish for improved optical clarity and distortion-free reading.

- For use on nonporous surfaces
- Streak-free finish makes it ideal for cleaning transparent surfaces
- Eliminates static charge with one application
- Reduces attraction of dust and other airborne contaminants
- Non-drip foaming action makes it ideal for vertical surfaces
- Safe on all surfaces
- Non-flammable and non-abrasive

Conformal Coatings Remover
Conformal Coating Strippers are available in liquid, gel and pen format. They remove most reworkable conformal coatings and readily remove thermoplastic (non-cross linked) acrylics, urethanes, and silicone-based conformal coatings. They also facilitate the removal of some thermoset coatings, like cross-linked silicones and polyurethanes, by softening or swelling the coat to aid with mechanical removal.

This stripper is safe for most types of PCB components. It is fully biodegradable and environmentally safe.

Conformal Coating Stripper - Liquid
- Liquid format allows for full immersion of PCBs
- Available in liquid and pen formats

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>8309-850ML</td>
<td>850 mL</td>
<td>28.7 g</td>
<td>Liquid</td>
<td>Can</td>
</tr>
<tr>
<td>8309-3.78L</td>
<td>3.78L</td>
<td>3.37 kg</td>
<td>Liquid</td>
<td>Can</td>
</tr>
<tr>
<td>8309-P</td>
<td>10 mL</td>
<td>8.93 g</td>
<td>Liquid</td>
<td>Pen</td>
</tr>
</tbody>
</table>

Conformal Coating Stripper - Gel
- Ideal for spot removal

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Form</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>8310A-55ML</td>
<td>55 mL</td>
<td>48.3 g</td>
<td>Gel</td>
<td>Bottle</td>
</tr>
<tr>
<td>8310A-850ML</td>
<td>850 mL</td>
<td>747 g</td>
<td>Gel</td>
<td>Can</td>
</tr>
<tr>
<td>8310A-3.6L</td>
<td>3.6 L</td>
<td>3.16 kg</td>
<td>Gel</td>
<td>Can</td>
</tr>
</tbody>
</table>

*Users in California, and other states duplicating the California Air Resource Board's Consumer Product’s Program, must dilute this product 25% by mass with either water or acetone before use.

**CARB Category and Limit: Paint Remover 50%
MG Chemicals offers a full line of wipes, pre-saturated with high quality cleaning solutions. These wipes are a powerful static dissipator. They are perfect for a multitude of cleaning tasks: LCD screen, optical lenses, and credit and debit card readers. Our wipes are individually packaged. The multi-purpose alcohol wipes are also available in an economical tub format.

**Clean Pad**
Thick lint-free wipes pre-saturated with 91% pure isopropyl alcohol and 9% deionized water. Made from a blend of polyester and woodpulp, they are strong and durable. Individually wrapped and hermetically sealed to prevent evaporation and maintain solvent effectiveness. Ideal for cleaning sensitive contact surfaces, computers, electronic equipment, magnetic tape heads, instruments, fiber optic connectors and ferrules. Offered in 50 wipes per box packages.

- Polyester / Woodpulp thick durable fabric
- 91% pure isopropyl alcohol
- Plastic safe
- Fast evaporation
- Lint free
- Non-abrasive
- Sealed individual packaging
- 3" x 4" wipe size
- Colour: white

**Optical Wipe**
These wipes are specially formulated for cleaning optical lenses. A special solution formula provides anti fog longer lasting clarity to optical components and is safe to use on anti-glare coated surfaces. Its durable bleached biodegradable crepe paper prevents premature ripping during use. The individually sealed wrapping provides longer solution preservation while providing the convenience of use anywhere, without having to carry a bulk container.

- Specially formulated for optical devices
- Strong bleached creped rip-free paper
- Safe to use on anti-glare coated lenses
- Provides longer lasting clarity
- Biodegradable
- Individually packaged
- Size: 5" x 6"
- Color: white

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Weight</th>
<th>Format</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>8243-WX25</td>
<td>1.2 g</td>
<td>N/A</td>
<td>Wipes 25 (5&quot; x 6&quot;)</td>
</tr>
<tr>
<td>824P-50</td>
<td>4.71 g</td>
<td>0.16 oz</td>
<td>Wipes 50 (5&quot; x 6&quot;)</td>
</tr>
</tbody>
</table>
Multi-Purpose Alcohol Wipes for Electronics

General all-purpose low lint 70/30 Isopropyl Alcohol blend pre-saturated wipes. Safe on plastics. Made from a blend of polyester and woodpulp, they are strong and durable. A convenient tub provides easy dispensing and keeps the wipes wet and effective when the sealed cover stays in place. This product is compliant with food safety regulations in Canada (CFIA) and Internationally (NSF) making it the ideal cleaner and disinfectant for use in and around food processing establishments. Offered in 75 wipes tubs or 25 individually wrapped and sealed boxes.

- 70/30 Isopropyl blend
- Polyester / woodpulp thick durable fabric
- Plastic safe
- Moderate evaporation
- Low lint
- Non-abrasive
- Convenient
- CARB Compliant
- Registered with NSF for use in and around food processing establishments.
- Bulk packaging or Individual sealed wrap
- 6” x 7” wipe size
- Colour: White

Isopropyl Alcohol Wipe

Handy general purpose cloth type wipes pre-saturated with 99.95% isopropyl alcohol. Made from a blend of polyester and woodpulp they are strong and durable. Each wipe is wrapped and sealed individually to prevent solution evaporation and maintain its full effectiveness. Ideal format for field repair & maintenance work. Quick and convenient. Offered in boxes of 25, 50 or 500 wipes.

- 99.95% isopropyl alcohol
- Polyester / Woodpulp thick durable fabric
- Plastic safe
- Moderate evaporation
- Zero lint
- Non-abrasive
- Sealed individual packaging
- 5” x 6” wipe size
- Colour: White

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Weight</th>
<th>Format</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>8241-T</td>
<td>172 g</td>
<td>Tub</td>
<td>75 (6” x 7”)</td>
</tr>
<tr>
<td>8241-WX25</td>
<td>2.5 g</td>
<td>Wipes</td>
<td>25 (5” x 6”)</td>
</tr>
<tr>
<td>8241-WX50</td>
<td>2.5 g</td>
<td>Wipes</td>
<td>50 (5” x 6”)</td>
</tr>
<tr>
<td>8241-WX500</td>
<td>2.5 g</td>
<td>Wipes</td>
<td>500 (5” x 6”)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Weight</th>
<th>Format</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>824-WX25</td>
<td>2.5 g</td>
<td>Wipes</td>
<td>25 (5” x 6”)</td>
</tr>
<tr>
<td>824-WX50</td>
<td>2.5 g</td>
<td>Wipes</td>
<td>50 (5” x 6”)</td>
</tr>
<tr>
<td>824-WX500</td>
<td>2.5 g</td>
<td>Wipes</td>
<td>500 (5” x 6”)</td>
</tr>
</tbody>
</table>

a) Pack of 12 tubs
b) Individually wrapped wipes
LCD Screen Cleaning Kit
MG Chemicals LCD Screen Cleaning Kit is made of an advanced non-drip gel static free formula, that will safely and effectively clean the toughest residues from your LCD and Plasma screens, and an absorbent high quality microfiber cleaning cloth that leaves surfaces lint-free, streak and residue-free.

- Advanced non-drip gel formula
- Specially formulated for LCD and plasma screens
- Lint-free
- Anti-static
- Streak-free
- Cloth size: 12" x 12"
- Cloth color: blue

LCD Cleaning Wipes (Single pack)
New individually sealed packs allow you to always have a cleaning wipe handy when needed. Made of a durable bleached creped biodegradable paper that prevents premature ripping during use. The gentle formula of these specialty wipes will clean effectively, without leaving lint or streaks, and will not drip. The antistatic barrier left behind repels dust. Also effective for cleaning telephones, keyboards, peripherals, or desktops. Available in 25 wipes per box.

- New and improved formula
- Strong bleached creped rip-free paper
- Safely cleans LCD screens
- Lint-free
- Anti-static
- Streak-free
- Biodegradable
- Sealed individual packaging
- Size: 5" x 6"
- Color: white

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Format</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>8242-K</td>
<td>200 mL</td>
<td>N/A</td>
<td>Wipes</td>
<td>Kit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Net Volume</th>
<th>Net Weight</th>
<th>Format</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>8242-WX25</td>
<td>N/A</td>
<td>1.5 g</td>
<td>Wipes</td>
<td>25 (5&quot; x 6&quot;)</td>
</tr>
</tbody>
</table>
MG Chemicals’ line of dry wipes effectively and easily removes dust, lint, oils and other liquids from delicate equipment. Great for cleaning and dusting monitors, keyboards, telephones, printers, optical surfaces, lab equipment, and other precision instrumentation.

**Optiwipes**
Super soft hydroentangled polyester fiber. Excellent absorbency and strength when mopping up spills and cleaning solutions. Qualifies for use in controlled environments that maintain a low level of pollutants, such as dust, airborne microbes, aerosol particles and chemical vapors. Use to clean optical surfaces, photo processing, lab equipment, and other precision instrumentation.

- Strong textured polyester fabric
- Zero lint
- 4” x 4” wipe size
- Colour: white

**Hydrowipes**
General purpose wipes made from a super absorbent hydroentangled nonwoven blend of cellulose and polyester. It is pure, super-absorbent, versatile and economical. Qualifies for use in controlled environments that maintain a low level of pollutants such as dust, airborne microbes, aerosol particles, and chemical vapors.

- Strong non-woven blend of cellulose and polyester
- Super absorbent
- Zero lint
- 8” x 9” wipe size
- Colour: white

**Twillwipes**
Super soft hydroentangled polyester fiber. Excellent absorbency and strength when cleaning up spills and solvents. Qualifies for use in controlled environments that maintain a low level of pollutants such as dust, airborne microbes, aerosol particles, and chemical vapors. Use to clean optical surfaces, photo processing, lab equipment, and other precision instrumentation.

- 100% cotton twill weave
- Zero lint
- Strong texture cotton
- Static free
- Super absorbent: absorbs three time its own weight
- 4”x4” and 9” x 9” wipe sizes
- Solvent resistant
- Thermally stable
- Colour: White
MG Chemicals’ line of swabs are offered in chamois, cotton and urethane varieties. Whether you need a round, tapered or rectangular tip shape you will find the right configuration for your general and precision cleaning applications.

### Double Headed Cotton Swabs
A double-headed low lint, extra absorbent U.S.P. pharmaceutical grade, purified round cotton tip swab. Bonded on a 6” rigid white birch staff for extra resistance when applying pressure is needed. Available in packages of 100.

- Pharmaceutical grade
- Use for cleaning lenses and optical devices
- Special construction eliminates migration of chemicals with adhesives for cleaning
- No glue used on tip
- Small cotton tip
- Wood handle is naturally biodegradable

### Tapered Cotton Swabs
A double-headed low lint, extra absorbent U.S.P. pharmaceutical grade purified tapered cotton tip swab providing added precision. Bonded on a 6” rigid white birch staff for extra resistance when applying pressure is needed. Available in packs of 100.

- Pharmaceutical grade purified cotton
- Tapered tip for added precision
- Compatible with most solvents
- Rigid wood staff
- Soft and non-abrasive

### Chamois Swabs
The ideal swab for your audio/video magnetic heads and optical pick ups. Made from a lint free, synthetic suede bonded to a bendable plastic handle, it facilitates access to hard-to-reach areas. Available in single or double-headed formats.

- Synthetic chamois cloth head
- Flexible, formable plastic handle
- Free of oil and residues
- Soft and non-abrasive
- Tightly wrapped
- Bonded without adhesives
- Seamless construction

---

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>811-100</td>
<td>100</td>
<td>Bag</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>8112-100</td>
<td>100</td>
<td>Bag</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>810-15</td>
<td>15</td>
<td>Bag</td>
</tr>
<tr>
<td>810-50</td>
<td>50</td>
<td>Bag</td>
</tr>
<tr>
<td>810-500</td>
<td>500</td>
<td>Bag</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>810D-15</td>
<td>15</td>
<td>Bag</td>
</tr>
<tr>
<td>810D-50</td>
<td>50</td>
<td>Bag</td>
</tr>
<tr>
<td>810D-500</td>
<td>500</td>
<td>Bag</td>
</tr>
</tbody>
</table>
**Foam Swabs**
A durable precision cleaning applicator, shred resistant, made from 100% urethane foam head with 100 PPI porosity. Bonded securely to a 6” birch shaft providing extra strength when additional pressure needs to be applied. Available in packs of 10, 50, 250 and 1000.

- Pharmaceutical grade purified cotton
- General cleaning swab
- Used in electronic assembly and medical device manufacturing
- Removing contamination in static sensitive environments
- Ideal for applying adhesives or other solvents
- Lint and residue free
- Can be used with IPA and DI water or dry
- Soft and non-abrasive

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>813-10</td>
<td>10</td>
<td>Bag</td>
</tr>
<tr>
<td>813-50</td>
<td>50</td>
<td>Bag</td>
</tr>
<tr>
<td>813-250</td>
<td>250</td>
<td>Bag</td>
</tr>
<tr>
<td>813-1000</td>
<td>1000</td>
<td>Bag</td>
</tr>
</tbody>
</table>

**Foam Over Cotton Swabs**
A highly absorbent precision cleaning applicator. Shred resistant, 100% urethane foam heads with 100 PPI porosity over extra absorbent U.S.B. pharmaceutical grade purified cotton. Bonded securely to a 6” birch shaft providing extra strength when additional pressure must be applied. Available in packs of 10, 50, 250, 1000.

- Critical-environment cleaning swab
- Foam-over-cotton head
- Wood handle
- Soft and non-abrasive

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>812-10</td>
<td>10</td>
<td>Bag</td>
</tr>
<tr>
<td>812-50</td>
<td>50</td>
<td>Bag</td>
</tr>
<tr>
<td>812-250</td>
<td>250</td>
<td>Bag</td>
</tr>
<tr>
<td>812-1000</td>
<td>1000</td>
<td>Bag</td>
</tr>
</tbody>
</table>

**Rectangular Foam Swabs**
Large rectangular foam head bonded to a sturdy handle for aggressive cleaning applications. Large shred resistant, 100% urethane foam heads with 100 PPI porosity. Bonded securely to a 5 inch polypropylene shaft. Available in packs of 10, 50, 250, 1000.

- 100% urethane oversized foam head
- Sturdy handle
- Highly absorbent hydrophilic foam tip
- Fast wet wipe characteristics
- Large surface area ideal for cleaning parts with DI water or IPA
- Used for surface hygiene testing
- Resists smearing and streaking
- Propylene shaft
- Easy disposal, burnable
- Class 100 - 1000

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>812-10</td>
<td>10</td>
<td>Bag</td>
</tr>
<tr>
<td>812-50</td>
<td>50</td>
<td>Bag</td>
</tr>
<tr>
<td>812-250</td>
<td>250</td>
<td>Bag</td>
</tr>
<tr>
<td>812-1000</td>
<td>1000</td>
<td>Bag</td>
</tr>
</tbody>
</table>

**Anti-Static Foam Over Cotton**
An Antistatic foam head over extra absorbent U.S.B. pharmaceutical grade purified cotton. Bonded securely to a 6” birch shaft providing extra strength when additional pressure needs to be applied. Compatible with most solvents. Available in packs of 10, 250 and 1000.

- Pharmaceutical grade purified cotton
- General cleaning swab
- Used in electronic assembly and medical device manufacturing
- Removing contamination in static sensitive environments
- Ideal for applying adhesives or other solvents
- Lint and residue free
- Can be used with IPA and DI water or dry
- Soft and non-abrasive

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>812AS-10</td>
<td>10</td>
<td>Bag</td>
</tr>
<tr>
<td>812AS-250</td>
<td>250</td>
<td>Bag</td>
</tr>
<tr>
<td>812AS-1000</td>
<td>1000</td>
<td>Bag</td>
</tr>
</tbody>
</table>
MG Chemicals brushes enhance the delivery of your cleaner, and remove loose debris that chemical cleaners alone cannot. Offered in premium grade stainless steel, brass, horse hair and hog hair bristles. Handles come in a selection of wood, stainless steel, cad plated steel, or tin. Depending on your needs you can choose from abrasive or non-abrasive.

**Stainless Steel Cleaning Brush**

A 3-row heavy duty toothbrush-style scratch brush with stainless steel bristles and long plywood handle. Great for cleaning soldering iron tips. Great for cutting corrosion. A great surface scratcher, it is perfect for solder surface preparation. An excellent utility brush.

- Strong plywood handle
- Secured stainless steel bristles eliminating bristle loss and contamination
- 7 ¾” x 7/16” plywood handle
- 7/16” trim length
- 3 wide x 7 long bristle rows
- Brush surface 1 3/8” x 1/4”

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>850</td>
<td>1</td>
<td>Bag</td>
</tr>
</tbody>
</table>

**Brass Cleaning Brush**

A 3-row heavy duty toothbrush-style scratch brush with brass steel bristles and long plywood handle. Great for removing oxides and corrosion from male and female connector ends, burnishing without removing base metal and cleaning soldering iron tips.

- Heavy duty scraping and brushing
- Strong plywood handle
- Secured brass steel bristles eliminating bristle loss and contamination
- 7 ¾” x 7/16” plywood handle
- 7/16” trim length
- 3 wide x 7 long bristle rows
- Brush surface 1” x ¼”

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>851</td>
<td>1</td>
<td>Bag</td>
</tr>
</tbody>
</table>

**Hog Hair Cleaning Brush**

A 3-row toothbrush-style general cleaning scratch brush. Made of natural stiff hog hair bristles with a long plywood handle. Makes a great soldering tool that can be used for a wide variety of cleaning applications. It is excellent for removing flux and general clean up. Can be used dry or wet. Works well with sticky or crusty materials.

- Strong plywood handle
- Secured hog hair bristles eliminating bristle loss and contamination
- 7 ¼” x 7/16” plywood handle
- 7/16” trim length
- 3 wide x 7 long rows
- Brush surface 1 3/8” x 1/4”

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>852</td>
<td>1</td>
<td>Bag</td>
</tr>
</tbody>
</table>

**Large Hog Hair Cleaning Brush**

A large, tuft-patterned, natural stiff hog hair general cleaning brush that makes cleaning larger surface areas easier and quicker. It features a 1” wide by 8 3/8” long plywood handle. It is excellent for removing flux, can be used on dry or wet surfaces, works well with sticky or crusty material and can also be used for general cleaning tasks.

- Strong plywood handle
- Secured natural hog hair bristles eliminating bristle loss and contamination
- Stiff bristles
- 8 1/4” x 1 1/16” plywood handle
- 3/4” trim length
- 4 wide x 9 long bristle rows
- Brush surface 2 1/8” x 7/8”

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>853</td>
<td>1</td>
<td>Bag</td>
</tr>
</tbody>
</table>
Horse Hair Cleaning Brush
A small, inexpensive, high precision general cleaning brush with natural horse hair bristles and a sturdy tin handle. Soft durable bristle brush that works well for dusting, cleaning with fluids and general cleanup. Brushes are tested for bristle resistance for the most rigorous tasks.

- Sturdy tin handle
- Secured natural horse hair bristles eliminating bristle loss and contamination
- Soft bristles
- 5 1/4” x 3/8” tin handle
- 3/4” trim length
- Brush face 1/2” wide

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>855</td>
<td>1</td>
<td>Bag</td>
</tr>
<tr>
<td>855-144</td>
<td>144</td>
<td>Box</td>
</tr>
</tbody>
</table>

Double Horse Hair Cleaning Brush
A double-ended, inexpensive cleaning brush. Made of short natural horse hair bristles and a cad plated steel handle, it is ideal for heavy duty scrubbing. One end is chiseled to clean hard-to-reach and tight corners, and the other is straight for precision cleaning and coating.

- Stiff stainless steel handle
- Secured natural horse hair bristles eliminating bristle loss and contamination
- One end chiseled brush
- 4 1/2” handle
- 1/4” trim length
- Brush face 1/2” wide

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>856</td>
<td>1</td>
<td>Bag</td>
</tr>
</tbody>
</table>

Chisel Hog Hair Cleaning Brush
A hog hair brush with a vertical style chiseled short plywood handle. Excellent for removing flux and general clean up and can be used dry or with fluids.

- Strong plywood handle
- Secured natural hog hair bristles eliminating bristle loss and contamination
- 4 15/16” x 1 1/16” handle
- 1/2” trim lengths
- 3/4” x 5/16” trim length
- 2 wide x 6 long bristle rows
- Brush face 7/8” x 3/8”

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>857</td>
<td>1</td>
<td>Bag</td>
</tr>
</tbody>
</table>

Horse Hair Cleaning Brush
A 3-row toothbrush style general cleaning scratch brush. Made from natural soft horse hair bristles with a long plywood handle. Excellent for removing flux residues, sticky or crusty materials it can also be used for general cleaning.

- Strong plywood handle
- Secured natural horse hair bristles eliminating bristle loss and contamination
- 7 3/4” x 7/16” handle
- 7/16” trim lengths
- 3 wide x 7 long rows
- Brush face 1 3/8” x 1/4”

<table>
<thead>
<tr>
<th>Cat. Number</th>
<th>Pieces</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>859</td>
<td>1</td>
<td>Bag</td>
</tr>
</tbody>
</table>