



# MicroCare Quality

## The MicroCare Promise:

**MicroCare products will deliver faster, better, safer, cheaper benchtop cleaning, or your money back, guaranteed.**



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## Disclaimer

This is a general guide to cleaning applications and does not replace individualized discussions. MicroCare publishes this information from sources believed to be accurate. MicroCare does not guarantee the accuracy of the data and assumes no liability in connection with using it. MicroCare's liability is limited to the replacement of product. Specifications subject to change without notice.



# Solvent Guide

Picking the right solvent and the right package can be a daunting task. The list below is an attempt to simplify the process. For a more detailed analysis of your choices, call the cleaning specialists at MicroCare at 800.638.0125 or email us at [TechSupport@MicroCare.com](mailto:TechSupport@MicroCare.com).

Circuit Board Cleaning	Optimal Choice	Other Great Choices
Lead-Free Fluxes/Pastes <sup>1</sup> All White Residues	<b>PowerClean™</b> <b>Page 6</b> Maximum-strength defluxer. The most economical choice for cleaning lead-free. Best replacement for Genesolv®	Flux Remover C MCC-FRC
Rosin Fluxes/Pastes (RMA, RA, R, SA)	<b>SuprClean™</b> <b>Page 6</b> Very strong defluxer and degreaser. Fast drying, nonflammable. Ideal for mil-spec electronics	Flux Remover C MCC-FRC ProClean™ MCC-PRO
“No Clean” Fluxes/Pastes, Mixed Fluxes/Pastes	<b>VeriClean™</b> <b>Page 7</b> Very versatile; not as strong as some choices, but cleans almost anything, plastic-safe. Very low VOC content.	Flux Remover C MCC-FRC ProClean™ MCC-PRO
OA and Water-Based Fluxes/Pastes	<b>Flux Remover C</b> <b>Page 6</b> A surprising capability from an HFC solvent. Great environmentally. Works on no-cleans, too	MultiClean™ MCC-MLC Axarel® 2200 MCC-AXL
Conformal Coatings <sup>2</sup>	<b>SuprClean™</b> <b>Page 6</b> Very strong cleaner, especially on acrylic coatings. Fast drying, nonflammable. Ideal for mil-spec electronics	Flux Remover C MCC-FRC ProClean™ MCC-PRO
Epoxies & Chip Bonders (Uncured)	<b>ExPoxy™ Remover</b> <b>Page 10</b> Very active cleaner, especially on uncured epoxies. Convenient, powerful choice for mis-printed PCBs	SuprClean™ MCC-SPR VeriClean™ MCC-DC1 BGA Stencil Cleaner MCC-BGA
Kapton® Tape, Pressure Sensitive Labels, Glues <sup>3</sup>	<b>TidyPen® Label Remover</b> <b>Page 9</b> Powerful cleaner in pocket-sized pen. Fast. Non-staining. Huge time-saver. Extremely economical	Bioact® EC7M MCC-EC7M VeriClean™ MCC-DC1
Maintenance Cleaners	Optimal Choice	Other Great Choices
Stencil Cleaning (All Solder Pastes)	<b>BGA Stencil Cleaner</b> <b>Page 8</b> Great on all types of uncured solders pastes, some epoxies. Very good in ultrasonic systems and dip tanks	Economy Stencil Wipes MCC-MLCW Stencil Wipes MCC-PROW ExPoxy™ Remover MCC-EPXW
Burned-on Flux Residues (Reflow Ovens, Wave Solder Machines)	<b>Reflow Oven Cleaner™</b> <b>Page 8</b> Excellent cleaner. Great on wave solder systems, pick-and-place systems. No aroma. Nonflammable	
Degreasing Metal, Glass, Ceramics, etc.	<b>Heavy Duty Degreaser C</b> <b>Page 8</b> Medium-strength. Great cleaning. Fast drying; targeted on organics. No aroma. Nonflammable	SuprClean™ MCC-SPR ExPoxy™ Remover MCC-EPX Reflow™ Oven Cleaner MCC-ROC
Contact Cleaning	<b>Contact Cleaner C</b> <b>Page 8</b> Instant-drying, nonflammable, plastic-safe electronics rinse. Best choice for electrical maintenance	
“Canned Air” and Freeze Sprays	<b>Big▪Blast™</b> <b>Page 9</b> 14 oz. jumbo aerosol for maximum cleaning. Nonflammable, ozone-safe. Many other package sizes	Micro▪Freeze™ MCC-FRZ Anti-Stat Micro▪Freeze™ MCC-FRZA Micro▪Blast™ Canned Air MCC-DST
Other Cleaning Requirements	Optimal Choice	Other Great Choices
Fiber Optics, Lasers, Photonic Components	<b>FiberCare™ Solvents</b> <b>Page 9</b> A unique line of super-pure, optical-grade cleaners and tools, optimized for photonic applications	Contact Cleaner C MCC-CCC

Notes: (1) PowerClean is engineered to clean the high-temperature fluxes and pastes used in the lead-free process. It also has been formulated to prevent the formation of white residues.  
 (2) For silicone conformal coatings, try VeriClean™. For urethane conformal coatings, try PowerClean™. Epoxy-based conformal coatings cannot be removed with solvents.  
 (3) Many glues are silicone-based. In that case, consider also VeriClean™ solvent, which removes silicone oils, silicone residues and silicone adhesives quickly and safely.

# Money-Saving Cleaning Tools

## Upgrade Your Benchtop Cleaning

Here's the simple truth: if your techs are still using "dip and brush" cleaning – and about 75% of the electronics industry is – your boards are not getting clean.

If you're using old-style aerosols, then your budget is taking a beating and your people are being exposed needlessly to fumes and over-spray. There is a better way: the Trigger Grip™ system.

The Trigger Grip system from MicroCare combines the inexpensive mechanical scrubbing of a brush with the speed and convenient rinsing of an aerosol.

It standardizes the cleaning process into four simple steps: wet, scrub, rinse and dry.

Because it's simple and fast, the tech has better control of the whole cleaning process. So they do a better cleaning job.

The Trigger Grip pays for itself by cutting solvent usage by 50% or even more. Companies also have found the time spent cleaning is reduced, typically saving 6-9 minutes per hour per technician. Quality is enhanced because the Trigger Grip makes it easy to rinse contamination off the boards.

So each Trigger Grip will help your techs clean better, faster and more safely, with less elbow grease. Companies save time, save solvent, eliminate waste, reduce their reject rates and improve quality.

The Trigger Grip system from MicroCare – simply a better idea.



## If you can't rinse, you can't clean. You need a Trigger Grip.

### IMPORTANT BENEFITS FROM EVERY TRIGGER GRIP

- ❖ Standardized cleaning processes, for ISO-9000 quality
- ❖ ESD-safe construction materials enhance static control programs
- ❖ Ergonomic design, light weight minimizes operator fatigue
- ❖ Easy rinsing makes for better cleaning results
- ❖ Huge variety of solvents for different substrates, contamination
- ❖ Customizable brush tips
- ❖ Controlled dispensing minimizes solvent waste, saves money
- ❖ 100% factory tested and unconditionally guaranteed

## The Solvent Miser™

This is the benchtop cleaning tool that delivers all the benefits engineers need and technicians appreciate. It slashes solvent consumption by enabling each can to last roughly twice as long as standard aerosols. Its light weight and ergonomic design speeds cleaning and minimizes worker exposure to solvent fumes. Another important benefit is that today's Trigger Grips are virtually indestructible, including the hose and aerosol connector.

Produced from ESD-dissipative materials, each Trigger Grip complies with MIL-STD-2000 and, when used by a properly-grounded operator, enhances the ESD protection at the workbench. Each Trigger Grip is equipped with the standard brush; other choices are available (see below). The Slo-Flo Trigger Grip is identical but equipped with the money-saving slo-flo brush, which makes it ideal for use with slow-drying solvents. Patented.

**Standard Trigger Grip**                      **MCC-ESD**  
*National Stock Number:*                      4940-01-361-0859

**Slo-Flo Trigger Grip**                      **MCC-ESD2**  
*National Stock Number:*                      3439-01-428-3237

## Bench Mounting Kit

This kit holds the Trigger Grip and a can securely at the workbench. One part (red arrow) keeps the can upright; the second piece (blue arrow) holds the Trigger Grip when not in use. This prevents damage to cans because unsecured cans may tip over and be damaged. MicroCare guarantees that cans used with the Trigger Grip and the Bench Mounting Kit will empty completely, so you get to use all the solvent you paid for. ESD-safe. Extremely durable.

**Bench Mounting Kit**                      **MCC-BK3**



This is a typical Trigger Grip installation: a Trigger Grip, a brush suited to the boards to be cleaned; the two-piece bench mounting kit; and a can of the best solvent in the industry. When bolted or screwed in place on a workbench, in conjunction with a properly grounded operator, it will ensure proper ESD protection. These three simple but durable tools save companies hundreds of dollars over their typical lifetimes while boosting quality.



## StatZap™ ESD Eliminator

Use this stainless steel nozzle on canned air, freeze sprays and high-pressure aerosols. It eliminates ESD damage caused by the friction of solvent racing down plastic spray tubes, and reduces those voltages to a harmless 50 volts or less. The swagged CoronaTip™ sucks away harmful ESD from the tip of the nozzle. Unique ShockShield™ sheathing prevents inadvertent contact with energized circuits. Patented.

**StatZap™ ESD Eliminator**                      **MCC-ZAP**

## CUSTOMIZE YOUR TRIGGER GRIPS WITH BRUSHES AND SYRINGE TIPS



**Our best-selling standard brush**                      **#MCC-RBNB**



**Sable brush for detail work**                      **#MCC-SQB**  
*National Stock Number:*                      7920-01-437-9680



**Slo-flo brush reduces waste**                      **#MCC-RBNB2**  
*National Stock Number:*                      3439-01-428-3240



**Standard surface-mount brush**                      **#MCC-SMB**  
**Slo-flo version**                      **#MCC-SMB2**



**Long-nose for cleaning pins**                      **#MCC-LNB**  
**Slo-flo version**                      **#MCC-LNB2**



**Powerful spray, .035" O.D.**                      **#MCC-SR35**

# Nonflammable Circuit Cleaners



## PowerClean™

### Your Best Choice for White Residues and Lead-free Solders

PowerClean™ is arguably the world's strongest ozone-safe solvent not based on trike, methylene chloride or nPB. It has been specifically formulated to rinse away lead-free residues, oils, inks and some conformal coatings without causing white residues. On the benchtop, it also is the best "drop-n" replacement for ozone-depleting HCFC-141b solvents, such as Genesolv® 2004.

Importantly, not only does this solvent remove white residues, its unique formulation *prevents their formation*.

Based on nonflammable, fast-drying HFC solvents, most users find PowerClean ideal for deflusing SMT boards made with lead-free solders and pastes. It is perfect for light-duty degreasing, cleaning connectors, removing light oxides and cleaning flux-covered pallets.

It is the best choice for cleaning during rework and repair because the cleaning is fast, the aroma is low and little elbow-grease is required. PowerClean is generally safe on most components, insulators and elastomers, including materials such as epoxies, nylon, polyethylene, polypropylene, and PVC, but may affect ABS, polystyrene and polycarbonates. As to be expected from such an active solvent, testing on plastics is recommended.

PowerClean is not suitable for use in heated cleaning systems.

When using PowerClean, the Trigger Grip™ dispenser is strongly recommended to reduce solvent waste and boost cleaning effectiveness. The Trigger Grip generally doubles the life of the aerosol can, making MicroCare cleaners half the price of competing formulations.

- Super-strong deflusing
- Best on no-clean solders & lead-free pastes
- Prevents white residues from forming, and removes them if they do
- Best benchtop replacement for HCFC-141b and HCFC-225 ozone-depleting solvents
- The most affordable cleaner in its class (nonflammable, fast-drying, ozone-safe)

## Flux Remover C

### The Most Versatile Choice

"Versatile" is the best way to describe Flux Remover C. This is an excellent general-purpose defluxer, especially on hard-to-clean "no-clean" fluxes and many water-based fluxes and pastes. With an ultra-low surface tension, it is the best choice for cleaning under tight-fitting BGA chips. It also can be used on through-hole boards, SMT designs, hybrid circuits, cables and connectors.

Noncorrosive and ultra-pure, static-safe Flux Remover C is safe on components and plastics. It is nonflammable, quick-drying and has only a very slight aroma. Residue-free, rinsing is never required. It is ozone-safe, has a low global warming factor and a reduced VOC content. It is safe for use in ultrasonic machines and heated vapor degreasers.

Since Flux Remover C is suitable for use in heated cleaning systems, select Flux Remover C when affordable, fast-drying, nonflammable, ozone-safe cleaning is required in **both** aerosol and bulk applications.

- Excellent cleaner for a many different types of contamination
- Nonflammable and fast drying
- Great on "no-cleans"
- Best replacement for HCFC-141b and HCFC-225 ozone-depleting solvents when used in heated vapor degreasers or other bulk applications

## SuprClean™

### The Strongest Option for Traditional Fluxes

This cleaner has been tailored to replace HCFC-141b as a defluxer specifically for rosin fluxes. This cleaner is optimized for heavy-duty benchtop-level deflusing and degreasing. It dries quickly, is nonflammable and has the best toxicity ratings of any solvent in its class. It compares to 1,1,1-TCA and HCFC-141b in cleaning strength but is completely ozone-safe. Test on plastics. Static-safe. Low odor. It is not suitable for use in heated cleaning systems.

Select SuprClean for super-powerful, fast-drying, nonflammable cleaning.

- Very strong cleaning, especially on rosin fluxes and dorganic oils and grease
- Nonflammable & fast drying

## PowerClean™

10.5 oz. / 300 g Aerosol	MCC-PW210A
10.5 oz./300 t Aerosol+Brush	MCC-PW2105
10 lbs./4.53 kg Minipail	MCC-PW2G
50 lbs./22.7 kg Pail	MCC-PW2P
500 lbs./227 kg Drum	MCC-PW2D

## Flux Remover C

3 oz./85 g TravelSAFE™ pump	MCC-FRCS
10.5 oz./300 g Aerosol	MCC-FRC
10 lbs./4.54 kg Minipail	MCC-FRCG
50 lbs./22.68 kg Pail	MCC-FRCP
500 lbs./226.80 kg Drum	MCC-FRCD

## SuprClean™

12 oz./340 g Aerosol	MCC-SPR
10 lbs./4.54 kg Minipail	MCC-SPRG
50 lbs./22.68 kg Pail	MCC-SPRP
500 lbs./226.80 Kg Drum	MCC-SPRD

# Money-Saving Defluxers

## VeriClean™

**An Affordable, Versatile Cleaner,  
Safe for People and the Planet**

The “Gold Standard” in ozone-safe, people-safe, budget-safe cleaning. This powerful defluxer serves double-duty as a medium-strength degreaser. It works great on rosin- and “no-clean” fluxes and pastes; almost any oil or light grease, and many adhesives. It literally melts away “solventless” silicone-based conformal coatings, silicone oils, silicone residues and silicone adhesives quickly and safely. Ozone-safe, low GWP and with a very low VOC rating, this is considered by many to be the most “planet-friendly” choice among solvents.

Select VeriClean when environmental requirements or the acceptance by benchtop techs are crucial factors.

- Great defluxer and light degreaser
- Superior toxicity ratings
- Almost no aroma, brisk drying
- Melts away many silicone-based conformal coatings

## ProClean™

**An Affordable Cleaning Choice  
for Less Demanding Applications**

For years our best-selling product, this humble cleaner delivers surprisingly strong cleaning. A blend of three ultra-pure water-free alcohols, it is the strongest of the alcohol-based choices. It is safer than rubbing alcohol and an excellent choice on rosin and “no-clean” fluxes. Pleasant, mild aroma; good toxicity ratings. Medium drying. Mil-spec approved. Plastic-safe.

Select ProClean when working on military products, or when cost control is critical.

- Great on solder pastes, fluxes and fresh chip-bonder
- Economical slow drying
- Suitable for military work

## MultiClean™

**The Most Economical  
Presaturated Stencil Wipe**

Mild and safe, MultiClean is a blend of alcohol and ultra-pure deionized water, which makes it very aggressive on OA fluxes and pastes. Most customers use MultiClean packaged in presaturated wipes for stencil cleaning.

Modest aroma, medium drying. Very good toxicity ratings. Plastic-safe, slow-drying, static-safe, ozone-safe, flammable. Select MultiClean for stencil cleaning, or for water-based contamination. Available only in presaturated wipes and bulk (unpressurized) packaging.

- Great stencil cleaner
- Medium drying, mild aroma

### About the Presaturated Wipes

MicroCare packages three types of presaturated wipes: Economy Wipes, featuring MultiClean™ solvent; the Stencil Wipes, featuring ProClean™ liquid, and the ExPoxy™ presaturated wipes featuring ExPoxy Remover.

All MicroCare presaturated tubs contain 100 lint-free polyester wipes, packaged twelve tubs per case. The vacuum-packed refills contain the same paper and solvent, but without the expense and waste of extra plastic tubs. There are 12 refills/box and included at no charge is one fresh, new, empty plastic tub. One year shelf life.

For more details on the presaturated wipes, see Page 10. For details on the specific solvents, see the MSDS sheets and the product specifications.



## VeriClean™

10 oz./284 g Aerosol	MCC-DC1
National Stock Number:	6850-01-447-4799
10 oz./284 g Aerosol+Brush	MCC-DC1106
6 lbs./2.72 kg Minicube	MCC-DC1G
32 lbs./14.50 kg Cubitainer	MCC-DC1P
345 lbs./156.48 kg Drum	MCC-DC1D

## ProClean™

12 oz./340 g Aerosol	MCC-PRO
National Stock Number:	6850-01-361-0867
12 oz./340 g Aerosol+Brush	MCC-PRO126
1.87 lbs./0.84 kg Presaturated Wipes	MCC-PROW
1 lbs./480 g Presat. Refill	MCC-PROW
6 lbs./2.72 kg Minicube	MCC-PROG
32 lbs./14.51 kg Cubitainer	MCC-PROP
360 lbs./163.27 kg Drum	MCC-PROD

## MultiClean™

1.87 lbs./0.84 kg Presaturated Wipes	MCC-MLCW
1 lbs./480 g Presat. Refill	MCC-MLCWR
6 lbs./2.72 kg Minicube	MCC-MLCG
32 lbs./14.51 kg Cubitainer	MCC-MLCP

# SMT Maintenance Products



## BGA Stencil Cleaner

**Fast & Thorough Stencil Cleaning, Even Inside Apertures**

The BGA Stencil Cleaner is a versatile, nonflammable water-based cleaner which removes all solder pastes — including lead-free materials — plus epoxies and some inks. Designed to replace IPA alcohol and other flammable solvents in the stencil cleaning application, it is particularly useful in fine-pitch applications. In those environments, when tiny amounts of solvent are being used to dislodge solder paste buried in tiny apertures, the cleaning strength of the BGA Cleaner dramatically improves the cleaning results and minimizes misprints. This powerful cleaner also minimizes the risk of damage to stencils from scrubbing with weaker cleaners.

The Stencil Cleaner is optimized for room temperature cleaning; it has almost no aroma and delivers excellent results in ultrasonic systems and dip tanks.

Nonfoaming BGA Stencil Cleaner is not suitable for use as a solvent for stencil paper in the stencil printers themselves.

## IsoClean™ Head Cleaner

**Your Basic Alternative Cleaner**

Mild cleaning with ultra-pure, water free, isopropanol. A great head cleaner. Static-safe. Mil-spec approved and mild defluxer, well-suited to “no clean” fluxes and pastes.

## Reflow Oven Cleaner

**Safe Cleaning, Activated by the Heat of the Oven**

The High-Performance Reflow Oven Cleaner instantly melts away burned-on flux residues from wave solder machines and reflow ovens. Strong, nonflammable and with almost no aroma, the Oven Cleaner cleans twice as fast as alcohol with far less scrubbing.

The cleaner works best when the soldering systems are still warm (>40°C/100°F) because the residual heat boosts the solvent's cleaning power. Heat also can be used in dip tanks and ultrasonic cleaners to further enhance the solvent's cleaning.

This product is safe on pallets, baffles, heating elements, clamps, chains, drive gears and housings. When used on a warm oven, the cleaner dries quickly, leaves no residues and is noncorrosive.

## Contact Cleaner C

**Nonflammable Rinse for Circuits**

This ozone-safe contact cleaner is nonflammable, non-conductive, plastic-safe and dries instantly with almost no aroma. It can be used safely on circuit boards, cable harnesses, relays, keyboards and motors. A very mild cleaner, it is the most affordable choice in its class. Ozone-safe and 100% VOC-exempt.

## Heavy Duty Degreaser C

**A Medium-Strength Cleaner**

A great choice for cleaning oils, grease and lubricants from all types of metal, ceramic and plastic. Noncorrosive and ultra-pure. Used on semiconductors, disk drives, switches and relays, motors, gyroscopes and medical devices. Nonflammable. Safe for use in vapor degreasers.

### BGA Stencil Cleaner

12 oz./340 g Pump (Refillable)	MCC-BGA
7 lbs./3.18 kg Minicube	MCC-BGAG
32 lbs./14.51 kg Cubitainer	MCC-BGAP
400 lbs./181.44 kg Drum	MCC-BGAD

### Reflow Oven Cleaner

12 oz./340 g Pump (Refillable)	MCC-ROC
7 lbs./3.18 kg Minicube	MCC-ROCG
32 lbs./14.51 kg Cubitainer	MCC-ROCP
364 lbs./165.08 kg Drum	MCC-ROCD

### IsoClean™ Head Cleaner

12 oz. /340 g Aerosol	MCC-BAC
6 lbs./2.72 kg Minicube	MCC-4722 or -BACG
32 lbs./14.50 kg Cubitainer	MCC-4724 or -BACP
355 lbs./161.00 kg Drum	MCC-4725 or -BACD

### Contact Cleaner C

3 oz./85 g TravelSAFE™ pump	MCC-CCCS
10.5 oz./300 g Aerosol	MCC-CCC
10 lbs./4.54 kg Minipail	MCC-CCCG
50 lbs./22.68 kg Pail	MCC-CCCP
500 lbs./226.80 kg Drum	MCC-CCCD

### Heavy Duty Degreaser C

3 oz./85 g TravelSAFE™ pump	MCC-HDCS
10.5 oz./300 g Aerosol	MCC-HDC
10 lbs./4.54 kg Minipail	MCC-HDCG
50 lbs./22.68 kg Pail	MCC-HDCP
500 lbs./226.80 kg Drum	MCC-HDCD

### Refillable Pump Spray Specs

These maintenance products are packaged in money-saving refillable pump sprays. Packaged ten to a box, these products are packaged in metal, ESD-safe cans. Included in each box are 100 lint-free stencil wipes (#MCC-W11).



Nothing removes tapes, labels and sticky residues like the amazing, pocket-sized TidyPen. Details, page 9



# Presaturated Stencil Wipes



## Stencil Wipes

1.87 lbs./0.84 kg Presat Wipes MCC-PROW  
1 lbs./480 g Presat. Refills MCC-PROWR

## Economy Wipes

1.87 lbs./0.84 kg Presat Wipes MCC-MLCW  
1 lbs./480 g Presat. Refills MCC-MLCWR

## ExPoxy™ Remover

1.87 lbs./0.84 kg Presat Wipes MCC-EPXW  
1.87 lbs./0.84 kg Presat. Refills MCC-EPXWR  
6 lbs./2.72 kg Minicube MCC-EPXG  
30 lbs./13.61 kg Cubitainer MCC-EPXP  
392 lbs./177.81 kg Drum MCC-EPXD

MicroCare packages four types of presaturated wipes: Economy Wipes, featuring MultiClean™ solvent; Stencil Wipes, featuring ProClean™ solvent, and the ExPoxy™ wipes, featuring the ExPoxy remover solvent.

The Economy Wipes are the best-selling presaturated package and are used for cleaning stencils and misprints. The Economy Wipes are very effective on all solder pastes and fluxes. Mild and skin-safe, they are used on all types of electronics and components, insulators, cables and connectors, flex circuits, solder masks and metals. It easily removes organic and ionic residues, light oils and other contaminants.

Based on a unique formulation of aliphatic hydrocarbons, ExPoxy™ Remover is the strongest of the four presaturated wipes. It is highly effective on leaded- and lead-free fluxes and pastes, water-soluble pastes and even “no-clean” products. Plastic-safe, residue-free and non-corrosive, ExPoxy™ Remover is safe on PCBs, stencils, components, connectors and tools. Because the cleaner is stronger and less flammable than alcohol, it is a superior choice for wetting the stencil rolls in stencil printers. This solvent has

been approved by DEK, EKRA, MPM, and Panasonic for use in their stencil printers.

In terms of packaging, these wipes feature the popular “slam-shut” lid, which extends the wipes’ shelf life even after the package has been opened. In addition, the money-saving refills (shown) typically reduce costs 30% or more. The wipes are made of ultra-clean, 100% hydroentagled polyester which will not lint or shred, making them an excellent choice for stencils and misprints.

All MicroCare presaturated tubs contain 100 lint-free polyester wipes, 8 in by 45 in (20cm by 12cm), loaded with about 450 grams of solvent. Priced per-tub, packaged twelve (12) tubs per case.

The vacuum-packed refills contain the same paper and solvent, but without the expense and waste of extra plastic tubs. They are packaged 12 bags/box and include at no charge is one fresh, new, empty plastic tub. Both types of packaging offer a one year shelf life.

None of the presaturated wipes leave residues. For details on the specific solvents, see the MSDS sheets and the product specifications.

# Flat, Lint-free Wipes

MicroCare offers a full line of dry, lint-free, flat wipes available in a wide array of fabrics, purities, textures, packaging and sizes. Used for stencil cleaning, rework, or any other surface wiping application, many are available in clean room packaging (see chart). Here are the best-sellers...



Part #	Wipe Size Inch	Material	Texture	Linting (0.5µm/m <sup>2</sup> )	Absorb'cy (mL/m <sup>2</sup> )	Clean Room	Packed in Clean Room Pack'd	Sheets Bags/ Case
<b>NON-WOVEN WIPES</b>								
MCC-W12	12x16	Polyester/ Cellulose	Waffled	15.4	250	No	No	50/ 5
MCC-W11	8.5x11	Polyester/ Cellulose	Smooth	18.0	280	No	No	100/ 6
MCC-W66	6x6	Polyester/ Cellulose	Smooth	15.4	250	No	No	50/25
<i>MCC-W66 National Stock Number: 7920-01-428-4372</i>								
MCC-W99	9x9	Polyester/ Cellulose	Smooth	15.4	250	Yes	Class 100	300/12
MCC-W99CP	9x9	Polyester	Smooth, Soft	0.2	332	Yes	Class 100	300/ 8
MCC-W88	8x8	Composite	Quilted	120.0	490	Yes	Class 100	100/12
MCC-W69MA	6x9	Reticulateded Foam	100ppi	200.0	730	No	No	25/ 30
<b>POLYESTER WIPES</b>								
MCC-W99PP	9x9	Knitted Polyester	Smooth, thin, soft	2.4	319	Yes	Class 10	150/ 8
MCC-W99HD	9x9	Knitted Polyester	Smooth, Thick	2.6	321	Yes	Class 10	150/ 5
MCC-W99SE	9x9	Knitted Polyester	Smooth, Thick, Sealed Edges	2.4	478	Yes	Class 10	150/ 5
MCC-W99POS	9x9	Knitted Polyester	Quilted Thick, Sealed Edges	14.6	945	Yes	Class 10	100/ 5
<b>COTTON WIPES</b>								
W99TJ	9x9	Cotton twill	Linen-like	129.5	219	Yes	Class 1000	300/ 12

# Stencil Cleaning Rolls

## Micro•Wipe™ FP Rolls

Since the start of the surface mount revolution, Micro•Wipe™ stencil rolls have been the industry's benchmark for quality. Now, MicroCare takes stencil cleaning to the next level with Micro•Wipe FP paper. Engineered specifically for lead-free applications and fine-pitch applications, this new paper increases throughput while reducing defects and lowering costs.

These rolls feature a hydroentagled mesh of a durable, absorbent polymer, avoiding the problems of cellulose fibers or glue residues. This new paper is 10 times cleaner than classic stencil rolls, 30% stronger and 22% more absorptive. This means they deliver better, more consistent cleaning. Most importantly, these fibers are strong enough to eliminate the need to clean with solvents.

### Wipe Without Solvents

While all other stencil papers require solvents for effective cleaning, Micro•Wipe FP rolls are sufficiently absorbent they can clean stencils without using solvents. This is a stencil printing breakthrough, because eliminating solvents avoids the major source of solder paste contamination and inconsistencies. Stencils cleaned without solvents produce fewer defects and require less rework. In addition, eliminating solvents shortens the cleaning cycle and reduces paper consumption. Obviously, it also avoids the cost of buying, storing, using and disposing of the solvent. No other stencil wiping product has been proven to be able to clean reliably and cost-effectively without solvents.

### Important Benefits

Because Micro•Wipe FP cleans better, cleaning is less often, resulting in up to a 60% increase in printer productivity. In addition, FP paper has delivered up to 83% reduction in defects at functional test. One OEM estimated switching to FP paper eliminated 13 rework techs per shift while another in Europe found the FP paper improved SMT yield from 95% to 99%, saving €150 in rework per shift.

With more than 200 sizes and roll configurations available, MicroCare has an FP stencil roll for your printer. Do your own testing, and see the savings for yourself.

## Popular Stencil Roll Configurations

### FP Stencil Wipes for MPM Systems

- MCC-101DA Standard roll, 33 feet (9.8 meters) long, 17.5 in. (440 mm) of paper on 18 inches (450 mm) wide core, 2.5 in. O.D., 0.75 in. I.D., 0.5 in. core extension on one end, paper core. Replaces MPM #P1485 for UP2000, UP3000, AP21S, AP23S, AP24 and AP25S and most other printers
- MCC-J140DA Small MPM roll. 33 feet (9.8 meters) long, 9 inches (230 mm) wide, all other measurements the same as -101DA
- MCC-J262DA\* Jumbo rolls for the biggest MPM Acella machines, approx. 110 feet (33 meters) long, 18.10 in. (460mm) wide core, but only 17.32 in. (440mm) paper centered on core; 4.0 inch outer diameter; .75 in. (20mm) inner diameter, cardboard core

### FP Stencil Wipes for DEK Systems

- MCC-105DA Standard DEK Roll, 30 feet (9 meters) long, 20.87 in. (530 mm) wide, plastic core, 520mm paper, .25 inch (5 mm) extension on both sides. For all modern DEK systems
- MCC-J119DA 30 feet (9 meters) of paper, 15.75 inches (400 mm) wide, extensions on each side

### FP Stencil Wipes for Fuji Systems

- MCC-J189DA\* Standard Fuji roll. Length 30 feet (9 meters), width 15.75 inches (400mm), outer diameter 2.5 in. (65mm); inner diameter 1 in. (25mm); cardboard core

### FP Stencil Wipes for Samsung Systems

- MCC-J255DN\* Standard Samsung roll. Length 30 feet (9 meters), width 17.5 inches (445 mm) on 18.9 inch (480 mm) core; roll outer diameter 1.97 in. (50 mm); inner diameter 0.75 in., cardboard core, with two notches on core

### FP Stencil Wipes for EKRA Systems

- MCC-J174DA Fits all Ekra systems; 19.68 in (500 mm) width

### FP Stencil Wipes for Panasonic Systems

- MCC-J154DA Approx. 108 feet (32 meters) long, 13.75 in (350 mm) wide paper and core; I.D. 1.5 in. inner diameter (40mm)

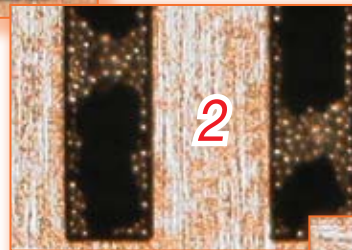
### FP Stencil Wipes for Yamaha Systems

- MCC-J240DA\* 120 feet (35 meters) long, width 16.75 inches (425 mm) on 16.75 inches (425 mm) core; roll outer diameter 5 inches (127 mm); cardboard core, I.D. 1 inch (25 mm)

Notes: MicroCare offers more than 200 different sizes and configurations using four different types of stencil roll paper; but these part numbers pertain only to the "FP" paper rolls that enables solventless stencil wiping. For other sizes, configurations and papers, contact MicroCare. Also: Part numbers marked with an asterisk have a 100-roll minimum.



Photo 1 shows the test stencil after cleaning with Sontara® "E" paper, 20 printing cycles, wiping wet with IPA. This is an excellent "benchmark" result: clean aperture, no fibers, no excess solder paste.



Photos 2, 3 and 4 show the same stencil after 20 printing cycles, wiping without IPA.

Easily visible are clogged apertures, fibers from the paper, and excess paste on the stencil, all of which can cause defects in the finished boards.



Photo 5 shows the same stencil after 20 printing cycles, wiped dry with Micro•Wipe FP paper. There are no clogged apertures, no loose fibers and no excess solder paste. This and other tests proved it is feasible, fast and reliable to wipe stencils without using solvents. This capability is available only with Micro•Wipe FP paper.

## The Important Advantages of MicroCare

### Innovation

Since 1983, MicroCare has been helping customers improve their products and processes while reducing their costs. To accomplish this, MicroCare has developed a world-class portfolio of cleaners, additives, manufacturing capabilities, processes and packaging that is unsurpassed. For example:

- Only MicroCare offers packaging in sizes ranging from 14mL pens to tank trucks
- Only MicroCare has pioneered low Global Warming propellants (currently available only in Europe)
- Only MicroCare offers ultra-high purity versions of products
- Only MicroCare offers ready-to-use dry film lubricants, eliminating time-wasting (and error-prone) mixing.
- MicroCare invented TravelSAFE™ packaging, which enables certain solvents to be shipped by air without extra hazmat fees.

The list of innovations is long, and that means customers can obtain the latest technology in the most cost-effective package.

### Breadth of Products

Our understanding of these materials is impressive and unique. Only MicroCare offers cleaners and lubricants in virtually every class: fluorinated, brominated, hydrocarbons, alcohols and siloxanes to name a few. Because of this expertise customers can be assured they will get the best answer for their needs, not just the answer that's in our warehouse.

### Product Stewardship

Using any industrial chemical carries certain risks. To minimize these risks, MicroCare has a rigorous product stewardship program that pervades the company. MicroCare experts can assist clients in developing the proper procedures for ordering, handling, shipping, storing, disposing and recycling these materials. MicroCare works hard to make sure your people are safe and your processes are efficient.

### Sterling Service

MicroCare customers enjoy extraordinary customer service. Products are shipped promptly and correctly. Generous inventories accommodate your unexpected demands. State-of-the-art computers track orders and shipments. And every phone call is answered by a friendly person, not a computerized voice-mail system.

### Environmental Issues

For many years, MicroCare has been recognized as a leader in efforts to protect the environment. MicroCare has made extraordinary efforts to protect the ozone layer, reduce VOC emissions and minimize global warming.

### Availability

All of the MicroCare products are made in the United States (although certain ingredients may come from other countries) and are available from selected premium industrial distributors around the world. Contact MicroCare or visit [MicroCare.com](http://MicroCare.com) for distributor details.

### About MicroCare

MicroCare is a leader in the high-speed, high-performance world of cleaning, coating and lubricating. With products for industries as diverse as electronics, transportation, photonics, medical devices and aerospace, MicroCare is your catalyst for process enhancements, lowering costs and improving quality. MicroCare is ISO 9001:2008 registered.

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