



TECHSPRAY®

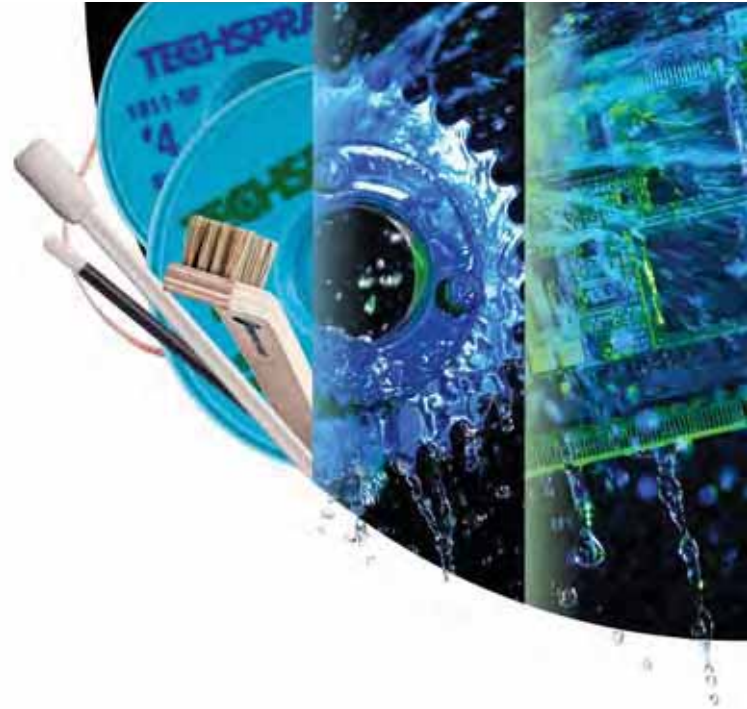
Product Catalog & Application Guide

REWORK & REPAIR

INDUSTRIAL MAINTENANCE

PCB ASSEMBLY




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Precision, Safety, Performance...

Advanced Chemistries to Improve Your Products & Processes.

Techspray specializes in cleaners, coatings, and other chemicals and tools that improve efficiency, safety, and performance.

PRECISION

Techspray is trusted where process control is essential. Precision-V™ is the latest solvent line designed to meet the cleanliness standards of aviation, electronics, and other critical cleaning applications. Precision-V is the ideal choice to replace AK225 as it approaches EPA phase-out in 2015.

SAFETY

Techspray offers cutting-edge technologies to improve safety for personnel and the environment. G3 Industrial Cleaner™ replaces toxic chemicals like nPB, TCE, and Perc, which are commonly used in industrial applications.

Techspray Renew™ products provide eco-friendly solutions for electronics assembly and plant maintenance. Natural, biodegradable ingredients, low VOC (volatile organic compounds), and zero GWP (global warming potential) are key benefits of Eco-dFluxer™, Pine-Shower™, Eco-Stencil™, and Eco-Oven™ cleaners.

Turbo-Coat™ is an acrylic conformal coating with fast dry time and no HAPS (hazardous air pollutants). All Techspray products are RoHS and REACH compliant.

PERFORMANCE

Techspray products are developed to improve your products and processes. We accomplish this through powerful cleaners, effective coatings, and top-notch customer service. Contact us at 800-858-4043 or tsales@techspray.com.

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Dusters

Techspray dusters blow away dust, microscopic contaminants, lint, metallic oxide deposits and other soils that can cause heat build-up or shorts in sensitive electronics.

- Moisture free
- Zero residue
- Safe on plastics
- Non-ozone depleting
- VOC exempt

Non-Flammable Duster

100% non-flammable HFC-134a based duster.



- Non-flammable
- Safest choice for energized equipment
- Velocity – 11.3 M/s

Specifications: GM HMA 12993-F, Chrysler Corp NPM# 85-147-6381 (1671-10S), Ford Tox #142435, NSN# 6830-01-335-9925 (1671-10S), Delco C00012555

- 1671-10S** 10 oz. (296ml) aerosol
- CAN1671-10S** 10 oz. (296ml) aerosol for Canada
- 1671-15S** 15 oz. (444ml) aerosol
- CAN1671-15S** 15 oz. (444ml) aerosol for Canada
- 1671-10RS** 10 oz. (296ml) aerosol refill (for use with 1928)
- 1928** Chrome trigger



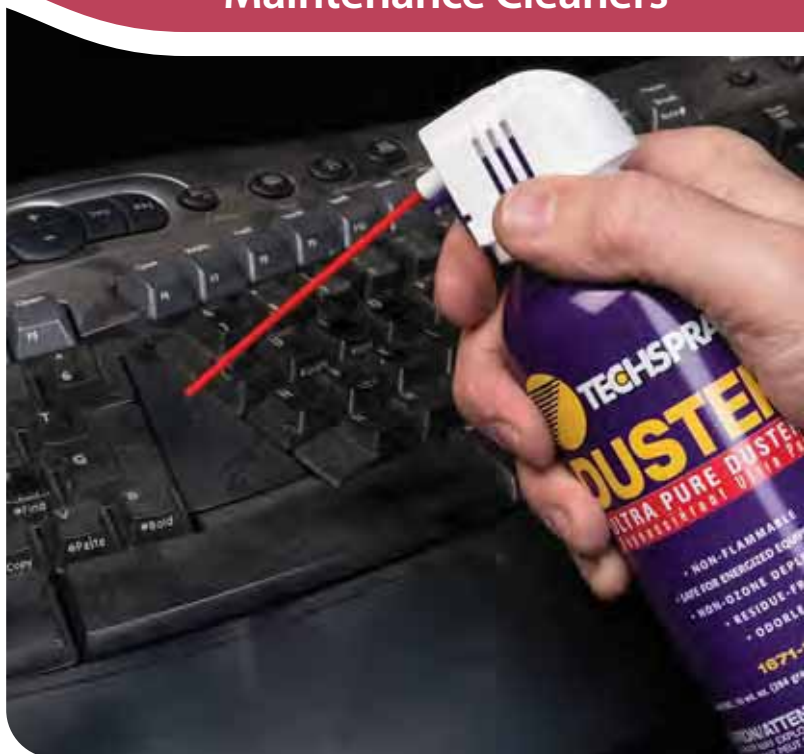
Economy Duster

Economical HFC-152a based duster.

- Best value – 30% more volume
- Lower global warming potential – 10% of HFC-134a
- Velocity – 11.4 m/s

- 1673-10S** 10 oz. (296ml) aerosol

Note: not for use on powered electrical equipment, on hot surfaces, and around open flames or sparks.



Eco-Duster

Formulated with new HFO-1234ze propellant, with a fraction of the global warming potential (GWP) of HFC-134a based dusters. Eco-Duster is a drop-in replacement – non-flammable, odorless, has low toxicity, and similar velocity.

- GWP less than 1/100th of HFC-134a
- Non-flammable
- Non-ozone depleting
- Velocity – 12 m/s

- 1580-10S** 10 oz. (296ml) aerosol



Vortex™ High Velocity Duster

High velocity, non-flammable dusters blast away dust and dirt. Vortex 360° (1697-8S) can be sprayed while tilted in any direction without dispensing liquid.

- Most powerful blast
- Non-flammable
- Vortex 360° sprays upside-down
- Velocity – 14.6 m/s

- 1697-8S** Vortex 360° 8 oz. (237ml) aerosol
- 1697-10S** 10 oz. (296ml) aerosol





Maintenance Cleaners

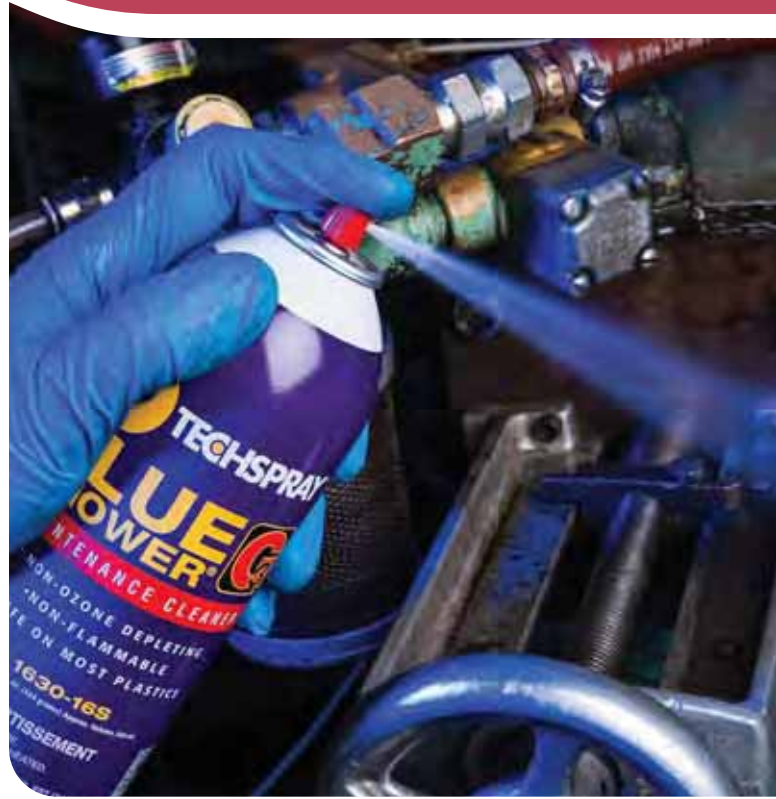
Maintenance cleaners clean oil and contaminants off of metal parts, printed circuit boards, barcode instruments, switch boxes, gear boxes, and engines.

Contact cleaners remove oxidation, oil, and other contaminants off of contacts, metal switches, motors, relays, generators, edge connectors, buss bars, circuit breakers, scales and sensors. Contact cleaners are used in electrical maintenance and to repair faulty contacts by removing insulative contamination.

Techspray offers traditional solvent-based cleaners and cutting edge water-based technologies marketed under the Techspray Renew™ brand.



TECHSPRAY RENEW™ branded cleaners are innovative solutions that combine the best of current “green” technologies to make the most powerful green cleaners on the market.



Techspray offers a variety of solvents and water-based cleaners that allow customers to match the right products with their cleaning needs. Choosing a strong, high quality cleaner saves time and money. Grease and oil flow right off, reducing the time and materials needed to scrub off stubborn soils.

| | WATER-BASED | | | | SOLVENT-BASED | | | | | | | | | | |
|---|-----------------|-------------------|----------------|------------------|-----------------|----------------------|---------------------------|------------------|----------------------|--------------|--------------------|--------------|------------------|-------------------------------|------------------|
| | 1500 Eco-Shower | 1502 Prime-Shower | 1505 Eco-Shine | 1605 LCD Cleaner | 1610 E-LINE IPA | 1611 E-LINE Zero-VOC | 1613 Label & Adh. Remover | 1620/1622 E-LINE | 1626 E-LINE Hi-Flash | 1630/1632 G3 | 1635 G3 Industrial | 1638 G3 Bulk | 1651 Precision-V | 1652 Precision-V Plastic-Safe | 3040 C/D Solv PE |
| PROPERTIES | | | | | | | | | | | | | | | |
| Non-flammable | ● | ● | ● | ● | | | | | ● | ● | ● | ● | ● | | |
| Evaporation rate-scale 1 (fastest) to 5 (slowest) | 5 | 5 | 5 | 5 | 2 | 1 | 5 | 1 | 4 | 1 | 1 | 1 | 1 | 1 | 1 |
| VOC% (EPA) - Aerosol | - | - | - | - | 75 | 0 | 98 | 75 | 75 | 64 | 69 | - | 37 | 13 | 58 |
| VOC% (EPA) - Bulk | 3 | 2 | 2 | >1% | 100 | 0 | - | 100 | 100 | - | - | 61 | 49 | 18 | - |
| VOC% (CARB) - Aerosol | - | - | - | - | 75 | 0 | 98 | 75 | 75 | 75 | 69 | - | 75 | 75 | 58 |
| VOC% (CARB) - Bulk | 0 | 0 | 0 | 0 | 100 | 0 | - | 100 | 100 | - | - | 100 | 100 | 100 | - |
| APPLICATIONS | | | | | | | | | | | | | | | |
| Ultrasonic degreasing | ● | ● | | | | | | ● | ● | | | ● | ● | ● | |
| Manual degreasing | ● | ● | | | ● | ● | | * | * | ● | ● | ● | ● | ● | ● |
| Work surface cleaning | ● | ● | ● | | | | | ● | | | | | | | |
| Glass cleaning | | | ● | ● | | | | | | | | | | | |
| Contact cleaning | | | | | | | | ● | ● | ● | ● | | ● | ● | ● |
| Paint & adhesives removal | ● | ● | | | | ● | ● | | | | | | | | |

NOTE: Test for substrate compatibility as a part of your qualification process.
 * Non-heated ultrasonic only



Eco-Shower™ Cleaner & Degreaser

Innovative water-based formula uses naturally-derived ingredients like citrus and soy oils to soak in and quickly cut through oil and grease. Use full strength for heavy grease or dilute with water for general cleaning. Also great for cleaning polished stainless steel and removing adhesive and ink, even from fabric!

- Clean heavy oil & grease
- Concentrated and dilutable
- Non-flammable
- Non-corrosive, moderate pH
- Safe on most plastics and painted surfaces
- Low VOC, Zero GWP

Specifications: Mercedes Benz MSC # 3104

| | |
|------------------|----------------------------------|
| 1500-QT | 1 qt. (0.95L) w/ trigger sprayer |
| 1500-G | 1 gal. (3.8L) plastic jug |
| 1500-5G | 5 gal. (19L) plastic container |
| 1500-54G | 54 gal. (205L) plastic drum |
| 1500-275G | 275 gal. (1041L) tote |



Pine-Shower Surface & Equipment Cleaner

Leveraging the cleaning power of pine, Pine-Shower quickly removes flux residues, grease and other soils, and leaves a non-oily finish. Does not contain butyl cellosolve, which is an unhealthy ingredient in many degreasers and surface cleaners.

- Clean flux and oils from equipment & surfaces
- Concentrated and dilutable
- Non-flammable
- pH in neutral range – non-corrosive
- Safe on most plastics and painted surfaces

| | |
|------------------|----------------------------------|
| 1502-QT | 1 qt. (0.95L) w/ trigger sprayer |
| 1502-G | 1 gal. (3.8L) plastic container |
| 1502-5G | 5 gal. (19L) plastic container |
| 1502-54G | 54 gal. (205L) plastic drum |
| 1502-275G | 275 gal. (1045L) tote |



Eco-Shower and Pine Shower Dilution Instructions

- 100%** – Caked-on grease, grills*, oil stains
- 10:1** – Greasy tools, concrete stains*, vents, heavily stained (food) appliances*, scuff marks on doors, heavy grease on wheels

- 30:1** – Chrome fittings, stainless steel, light general cleaning

* If on food processing equipment or walking surfaces, must be rinsed thoroughly to avoid slippery surface and undesirable residues.



Eco-Shine™ Glass & Surface Cleaner

Cleans glass, stainless steel, chrome, mirrors, tile, plastic, ceramic and enamel and leaves a streak-free finish. Effectively removes finger prints, light oils, and other soils. Made from 100% naturally-derived and sustainable ingredients.

- Streak-free*
- Non-ammoniated – safe on sensitive surfaces
- Non-flammable
- Low VOC, zero GWP
- Available in low-linting wipes

| | |
|--------------------|--|
| 1505-100DSP | 100 count pre-saturated wipes, 6" x 8" (15cm x 20cm) |
| 1505-QT | 1 qt. (0.95L) w/ trigger sprayer |
| 1505-G | 1 gal. (3.8L) plastic jug |

* If optical clarity is critical, use Eco-Shine with lint-free wipe (e.g. 2340-100, pg. 35)





IPA Electronics Cleaner

NEW!

Isopropyl Alcohol (IPA) in new, convenient aerosol packaging. 99.8% pure anhydrous (minimal water) IPA is excellent for light degreasing and tool cleaning.

- 99.8% pure IPA
- Ideal for degreasing, defluxing, stencil cleaning & fiber optics
- Compliant with SCAQMD rule 1171
- Plastic safe
- Low toxicity

Specifications for 99.8% IPA: Fed spec TT-1-735A (amend 3, notice 2) grades A&B, ASTM D770-05

1610-12S 12 oz. (355ml) aerosol

See full IPA product line on page 14



Contact Cleaner

Hydrocarbon-based contact cleaner formulated to be powerful, yet very economical. Eliminate brushing and scrubbing, saving time and materials.

- Powerful cleaner
- Ideal for sensitive plastics
- Low toxicity
- Fast evaporation

Specifications: (Aerosol) GM H1017; USDA Approved K-2 rated aerosol and bulk

- 1622-10S** 10 oz. (296ml) aerosol
- 1622-13S** 13 oz. (384ml) aerosol
- 1621-G** 1 gal. (3.8L) metal container
- 1621-5G** 5 gal (19L) metal drum
- 1621-54G** 54 gal (205L) metal drum



1622-10S



Zero-VOC General Purpose Cleaner

NEW!

Ideal for heavy-duty degreasing and for removing paint and sticky adhesive residues. Because it is VOC-free, there are no VOC restrictions – even in southern California!

Note: test first on plastics and painted surfaces to check for compatibility.

- Pure acetone
- Ideal for removing inks & adhesives
- VOC exempt
- Low toxicity
- Fast evaporation

- 1611-12S** 12 oz. (355ml) aerosol
- 1611-P** 1 pt. (0.47L) metal bottle



1611-12S

1611-P



Hi-Flash Maintenance Cleaner

NEW!

Non-chlorinated, light duty degreaser and electrical cleaner. Ideal for cleaning light oils and carbon residues from control panels, switch plates, enclosures, and work surfaces. Slower evaporation allows solvent to soak in and break down difficult soils.

- Ideal for electrical & maintenance cleaning
- Plastic safe
- High flash point
- Low odor
- Non-chlorinated
- Low toxicity

- 1626-11S** 11 oz. (398ml) aerosol
- 1626-G** 1 gal. (3.8L) metal container
- 1626-5G** 5 gal. (19L) metal container



1626-G

1626-11S



Blue Shower Maintenance Cleaner

Hydrocarbon-based cleaner formulated to be powerful, yet very economical. Eliminate brushing and scrubbing, saving time and materials.

- Powerful cleaner
- Ideal for sensitive plastics
- Low toxicity

Specifications: USDA: Approved K-2 rated aerosol.

- 1620-10S** 0 oz. (296ml) aerosol
- 1621-G** 1 gal. (3.8L) metal container
- 1621-5G** 5 gal. (19L) metal drum
- 1621-54G** 54 gal. (205L) metal drum



1620-10S

C/D SOLV™ RE

Rapidly evaporating alternative to chlorinated solvent cleaning. C/D Solv™ RE is a rapidly penetrating formulation that minimizes equipment maintenance time, and is safe on metals and most plastics.

- Rapidly evaporating
- Residue free
- Safe on most plastics
- Non-corrosive
- Rapidly penetrating

Specifications: USDA Approved K-2 rated.

Note: Authorized by the USDA for use in federally inspected meat and poultry plants.

- 3040-13S** 13 oz. (384ml) aerosol





Universal Bulk Cleaner

Powerful, non-flammable bulk cleaner that is ideal for manual cleaning of greases, silicone, and other oils, R, RA clean fluxes. Also recommended for ultra-sonic cleaning.

- Non-flammable
- Powerful cleaner
- All-in-one degreaser and defluxer

| | |
|-----------------|----------------------------|
| 1638-G | 1 gal. (3.8L) glass bottle |
| 1638-5G | 5 gal (19L) metal drum |
| 1638-54G | 54 gal. (205L) metal drum |



Blue Shower Maintenance Cleaner

Non-flammable cleaner formulated to be powerful, yet economical. Eliminate brushing and scrubbing, saving time and materials.

- Non-flammable
- Powerful cleaner
- Non-ozone depleting
- Dielectric strength – 27.3 kv

BEST SELLER!

Specifications: B-28678 = Blue Shower G3, Ford Tox #167818, Boeing spec D6-17487 rev. P

| | |
|-----------------|------------------------|
| 1630-16S | 16 oz. (473ml) aerosol |
|-----------------|------------------------|



Contact Cleaner

Non-flammable contact cleaner formulated to be powerful, yet economical. Eliminate brushing and scrubbing, saving time and materials.

- Non-flammable
- Powerful cleaner
- Dielectric strength – 36.2 kv

Specifications: B-28681 = Contact Cleaner G3, Ford Tox #167835, Boeing spec D6-17487 rev. P

| | |
|-----------------|------------------------|
| 1632-16S | 16 oz. (473ml) aerosol |
|-----------------|------------------------|



Industrial Maintenance Cleaner

Perfect for all types of degreasing, metal cleaning, contact cleaning, and other maintenance cleaning. Quickly blasts off oils, greases, silicones, dirt and grime. Much safer than the three most common non-flammable industrial solvents: TCE, nPB, and Perc.

- Non-flammable aerosol
- All-in-one degreaser & contact cleaner
- Rapid evaporation
- Low toxicity compared to TCE, nPB & Perc
- Dielectric strength – 30.5 kv

| | |
|-----------------|------------------------|
| 1635-20S | 20 oz. (591ml) aerosol |
|-----------------|------------------------|



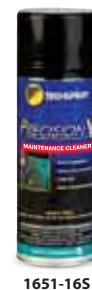
Flux Remover & Maintenance Cleaner

Formulated to reduce VOCs within your facility. Ideal for aviation and other applications where strict VOC caps apply (based on EPA VOC exemptions). Bulk chemicals ideal for cold/bucket cleaning and ultrasonics.

Note: Not intended for vapor degreaser.

- Non-flammable
- Low VOC
- Safe on most plastics
- High precision – residue-free
- Dielectric strength – 14 kv

| | |
|-----------------|----------------------------|
| 1651-16S | 16 oz. (473ml) aerosol |
| 1651-P | 1 pt. (0.47L) glass bottle |
| 1651-G | 1 gal. (3.8L) glass bottle |
| 1651-5G | 5 gal (19L) metal drum |



Plastic-Safe Universal Cleaner

Plastic-Safe formula is engineered for use on sensitive plastic components, packaging and casements. Ideal for optics cleaning, critical electronics and other sensitive surfaces. Qualifies under the aerospace NESHAP VOC guidelines.

- Non-flammable
- Low VOC
- Safe on sensitive plastics
- High precision – residue-free
- Dielectric strength – 23 kv

Specifications: NESHAP 63.741-753

| | |
|-----------------|----------------------------|
| 1652-10S | 10 oz. (296ml) aerosol |
| 1652-P | 1 pt. (0.47L) glass bottle |
| 1652-G | 1 gal. (3.8L) glass bottle |
| 1652-5G | 5 gal. (19L) metal drum |





Glass Cleaner

Foaming, non-streaking glass, plastic, and surface cleaner.

- Foaming action
- Streak-free
- Safe on glass & plastics
- Non-flammable

Specifications: GM H1018, Ford Tox #142432

1625-18S 18 oz. (532ml) aerosol



LCD & Plasma Screen Cleaner

Designed to clean sensitive surfaces including non-glare LCD and plasma screens. Best if used with 2368-2 microfiber wipe.

- Cleans sensitive surfaces
- Safe on non-glare coatings
- Alcohol & ammonia free
- Streak-free

1605-6FP 6 oz. (177ml) finger-pump spray bottle

Use with:
2363-50 2 - 16"x16" (41cm x 41cm) microfiber terry cloth

2368-2 50 - 8"x8" (20cm x 20cm) microfiber chamois



See page 36 for details.



LCD Cleaner



Other Cleaners

Gel formula will not run down into sensitive equipment.

TechClean® Card Reader Cleaner

Credit card size card pre-saturated with 98% pure IPA. Removes dirt, magnetic oxides, and other contaminants from credit card readers, ATM terminals, hotel doors, slot machines, and other types of readers.

- Increases reliability of readers
- Convenient pre-saturated card
- Safe on plastics
- Non-corrosive
- Non-ozone depleting



1603-50PK 50 - 2 1/8" x 3 3/8" (5.4cm x 8.6cm) individually wrapped cards

Roller Rejuvenator & Platen Cleaner

Citrus-based solvent designed to clean and revitalize rubber rollers and platens. Improves rubber roller grip and reduces misfeeds and jams.

- Improves roller grip
- Natural citrus-based solvent
- Safe on most plastics

Specifications: Ford Tox #142415

Note: Not available in California

1612-2SQ 2 oz. (59ml) plastic bottle



Label & Adhesive Remover

Citrus-based solvent safely and effectively removes labels and adhesive gums off equipment and products. Penetrates quickly and allows label to be peeled off without gummy residue.

- Removes labels and adhesive without scraping
- Penetrates rapidly
- Natural citrus-based solvent
- Safe on most plastics

Note: Not available in California

1613-6S 4.5 oz. (133ml) aerosol



TV Coolant

Projection TV heat transfer fluid used by many large screen television manufacturers. Used to cool projection TV guns.

- Heat transfer fluid
- Non-flammable
- Crystal clear
- For most brands of projection TVs
- Low odor

1915-16SQ 16 oz. (473ml) squeeze bottle



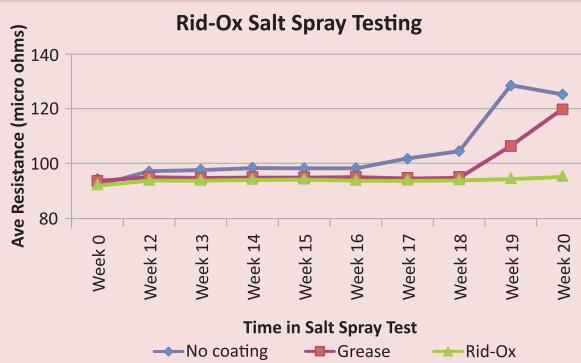
Rid-Ox™ Contact Protector

Used to remove oxides and sulfides, major causes of contact degradation. The non-insulative protective layer prevents oxidation and remains stable even under harsh conditions. Safe on most plastics and rubber seals.

- Cleans & protects contacts
- Lubricates for easy insertion
- Prevents oxidation
- Non-corrosive
- Safe on gold and platinum connectors



2112-6S 6 oz. (177ml) aerosol



Rid-Ox is proven to prevent contact degradation from oxidation.

Precision Lubricants

Techpray's precision lubricants are specifically designed to clean, lubricate, and protect electronic and electromechanical devices. Can be used as a general light lubricant to displace water and waterproof.

Slic™ Silicone Lubricant

Hydrocarbon based lubricant is an effective and economical solution.

- Plastic safe
- Waterproofs
- Displaces water



2420-10S 10 oz. (296ml) aerosol

Industrial Adhesives

Heavy-Duty Adhesive

Low soak-in adhesive exhibits particular strength when bonding surfaces such as dry wall, brick and concrete block. Heavy-Duty Adhesive will also work on surfaces such as paper, plastic, foam, wood and other fabrics. Excellent for both temporary and permanent bonds.

- High strength
- Fast tacking
- Water resistant
- Non-wrinkling



3500-11S 11 oz. (325ml) aerosol



Kleen-It™ Silicone Lubricant

Patented, non-flammable G3 formula cleans oxides, grease, and other contamination as it lubricates.

- Non-flammable
- Displaces water
- Cleans as it lubricates
- Waterproofs



2421-12S 12 oz. (355ml) aerosol

Economy Adhesive

Works extremely well on surfaces such as paper, cloth, cardboard, felt, foam rubber and most plastics and glass. High-solids content provides quick-tack ability. Web spray pattern covers larger areas quickly.

- Water resistant
- Non-wrinkling
- 3-way valve



3505-11S 11 oz. (325ml) aerosol



Contact Adhesive

Multi-purpose and ideal for bonding of polyethylene to various surfaces in preparation for asbestos abatement. Also works extremely well on paper, cloth, cardboard, felt, foam, rubber, most plastics and glass.

- Quick-tack ability
- Water resistant
- Flexible
- 3-way valve



3510-14S 14 oz. (414ml) aerosol



THE CLOCK IS TICKING... AK-225 PHASE-OUT

AK-225 will be banned January 1st, 2015 by the EPA.

The ban is driving users across the US to evaluate new cleaning processes (go to www.ak225ban.com for details). Because drop-in replacements are rarely as "drop-in" as you hope, Techspray offers the most complete set of solutions on the market.

Techspray offers a complete line of vapor-degreasing and cold cleaning solvents including blends of DuPont, HFE, Honeywell and AGC materials. Other chemical suppliers offer a narrow product line that only includes blends of the same base solvent. If they don't fit your exact cleaning requirements, you are forced to keep searching. Techspray will match the exact right solvent to your requirements, and work hand-in-hand with you to qualify. Our TechLab contains vapor-degreaser, ultrasonic, and other cleaning and diagnostic equipment to make the transition as effortless as possible.

Techspray's proprietary ForeverSolv™ solvent reclaim program recycles your used cleaner, saving you money, helping the environment and even allowing you to use AK-225 past the EPA ban date.

- Complete line of solvents including DuPont, 3M, Honeywell & AGC solvent blends
- Customized solutions available to solve every problem
- Full service TechLab for qualification testing
- Over 20 years' experience blending & supporting vapor-degreaser solvents
- Proprietary Precision-V™ formulas
- ForeverSolv™ solvent reclaim service

**Contact Techspray for your
FREE TechLab analysis.**



VAPOR-DEGREASER SOLVENTS

Ideal replacement for AK-225 based cleaners, which will be phased out by 2015 due to ozone depletion restrictions. (See side bar at left.)

Azeotropic properties that allow it to remain stable as it is cycled in a vapor-degreaser. It is not reactive or corrosive to metals commonly found in the construction of vapor-degreasers.

Exposure to Precision-V solvents is less hazardous than many other solvents commonly used in vapor-degreasers: e.g. TCE, nPB, and Perc.



For 1 gal., add
-G to part #

For 5 gal., add
-5G to part #

For drum, add
-54G to part #

PRECISION V AK-225 REPLACEMENT SOLVENTS

| Part # | Product Name | Base Solvents | kB value | Boiling Point (°F/°C) | VOC (g/l) | GWP | Degreasing | Defluxing | Plastic-Safe |
|--------|--------------|-----------------------|----------|-----------------------|-----------|------|------------|-----------|--------------|
| 1650 | VC-1000 | DuPont Vertrel® XF | 11 | 131/55 | exempt | 1300 | | | ● |
| 1653 | VC-1100 | DuPont Vertrel® XF | 95 | 109/43 | 1150 | 148 | ● | | |
| 1654 | VC-1200 | DuPont Vertrel® XF | 56 | 94/34 | 552 | 684 | ● | | |
| 1655 | VC-1500 | DuPont Vertrel® XF | 62 | 90/32 | 562 | 663 | | ● | |
| 1656 | VC-1600 | DuPont Vertrel® XF | 100 | 106/41 | 1063 | 264 | | ● | |
| 1657 | VC-1800 | DuPont Vertrel® XF | 38 | 99/37 | 645 | 688 | ● | ● | |
| 1659 | VC-1300 | DuPont Vertrel® XF | 20 | 102/39 | 536 | 806 | ● | | |
| 1688 | ME-1000 | 3M Novec 7100 | ~0 | 142/61 | exempt | 320 | | | ● |
| 1689 | ME-1100 | 3M Novec 7200 | ~0 | 169/76 | exempt | 55 | | | ● |
| 1684 | ME-1200 | 3M Novec 7100 | 52 | 109/43 | 896 | 42 | ● | | |
| 1686 | ME-1500 | 3M Novec 7100/7200 | 58 | 104/40 | 889 | 43 | ● | ● | |
| 1680 | AE-1000 | Asahi AE3000 | ~0 | 133/56 | ND | 540 | | | ● |
| 1681 | AE-1400 | Asahi AE3000 | ND | 139/54 | ND | 540 | ● | ● | ● |
| 1682 | AE-1500 | Asahi AE3000 | 32 | 100/38 | ND | 268 | ● | ● | |
| 1683 | AE-1600 | Asahi AE3000 | 38 | 108/42 | ND | 257 | ● | ● | |
| 1648 | HO-1000 | Honeywell Solstice PF | 25 | 66/19 | exempt | 7 | ● | | ● |

ND=Not Defined

AK-225 PRODUCT LIST – PHASE-OUT DEADLINE JANUARY 1, 2015

| | | | | | | | | | |
|------|----------------------|-------|-----|--------|-----|----|---|---|---|
| 1658 | AK225 ATE | AK225 | 115 | 90/32 | 507 | ND | ● | ● | |
| 1663 | AK225 | AK225 | 31 | 129/54 | 0 | ND | ● | ● | ● |
| 1664 | AK225 ATMS | AK225 | 77 | 104/40 | 507 | ND | ● | ● | |
| 1665 | AK225 AMS | AK225 | 51 | 129/52 | 88 | ND | | ● | ● |
| 1666 | AK225 AES | AK225 | 63 | 126/52 | 75 | ND | | ● | ● |
| 1667 | AK225 Blue Shower II | AK225 | 57 | 129/54 | 131 | ND | ● | | ● |
| 1669 | AK225T | AK225 | ~42 | 129/54 | 200 | ND | | ● | ● |

Note:

To order, add the following to the part # above: -1G for 1 gal. (3.8L), -5G for 5 gal. (19L), -54G for 54 gal. (205L)



SOLVENT RECLAIM PROGRAM

Techspray's ForeverSolv™ solvent reclaim program makes it possible to recycle and reuse cleaning solvents, eliminating the need for expensive waste disposal. Protect the environment while saving money!

Only Techspray offers this innovative program for our popular Precision-V™ and AK-225 vapor-degreasing solvents! With EPA exemptions in place, reclaimed AK-225 can continue to be used even after the 2015 phase-out date.

The ForeverSolv™ program is designed to be a no-hassle process. Techspray picks up the dirty solvent and drops of cleaned solvent a month later. We do all the work, while you reduce your solvent usage and disposal costs. Since Techspray is handling the process, you can be assured the tightest tolerances are maintained. We certify every drum provided back to you, and include a certificate of analysis (COA).

Program Advantages:

- Save 10-20% vs. new solvents
- Eliminate disposal fees
- Reclaimed solvent is Techspray certified
- Eco-friendly recycling program
- Available for Techspray Precision-V & AK-225 vapor-degreaser solvents
- Continue to use reclaimed AK-225 after 2015 phase-out date

Program Includes:

- Pick-up of spent solvent
- Incoming and outgoing GC, analysis provided with COA
- Removal of water, solids, high boiling volatiles (e.g. oils)
- Disposal of waste
- Fresh new drum



Electronic Cleaners

Flux removers (defluxers) remove flux residues and other contaminants left by manufacture, rework, or repair of printed circuit boards. Residues from higher, lead-free temperatures are more baked on and harder to clean. G3®, E-LINE™ and Precision-V™ flux removers have been proven very effective at removing fluxes baked on at lead-free temperatures.

Micro-components and fine pitch leads are delicate and easily damaged, so brushing and scrubbing should be avoided if possible. Both G3, E-LINE™ and Precision-V have a powerful spray and strong solvent that blasts off residues and cleans areas under components that a brush cannot touch.

Techspray offers traditional solvent-based cleaners and cutting edge water-based technologies marketed under the Techspray Renew™ brand.



TECHSPRAY RENEW™ branded cleaners are innovative solutions that combine the best of current “green” technologies to make the most powerful green cleaners on the market.

All Techspray flux removers have the following advantages:

- Help create bright, shiny solder joints
- Improve PCB reliability
- Prevent conformal coating defects
- Prevent corrosion from contamination
- RoHS compliant



| PROPERTIES | WATER-BASED | | | | | | | SOLVENT-BASED | | | | | | |
|---|--------------------------|--------------------------|--------------------------|---------------------|---------------------|---------------------|---------------|---------------|----------------|--------------|------------------|---------------------|-------------------|-----------------|
| | 1520 Eco-dFluxer SMT 200 | 1530 Eco-dFluxer SMT 300 | 1530 Eco-dFluxer SMT 100 | 1570 Eco-Stercil UM | 1571 Eco-Stercil HF | 1572 Eco-Stercil AQ | 1573 Eco-Oven | 1621 Ecoline | 1631 / 1634 G3 | 1638 G3 Bulk | 1651 Precision-V | 1649 Precision V NC | 1652 Plastic-Safe | 1608 / 1610 IPA |
| Non-flammable | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| Evaporation rate - Scale 1 (fastest) to 5 (slowest) | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| VOC % (EPA) - Aerosol | - | - | - | - | - | - | - | 75 | 64 | - | 37 | 75 | 13 | 75 |
| VOC % (EPA) - Bulk | 22 | 52 | 45 | 3 | 10 | 27 | 2 | 100 | - | 61 | 49 | - | 18 | 70/100 |
| VOC % (CARB) - Aerosol | - | - | - | - | - | - | - | 75 | 75 | - | 75 | 75 | 75 | 75 |
| VOC % (CARB) - Bulk | 22 | 52 | 45 | 3 | 10 | 27 | 2 | 100 | - | 100 | 100 | - | 100 | 70/100 |
| PCB CLEANING | | | | | | | | | | | | | | |
| Inline defluxing | ● | ● | ● | | | | | | | | | | | |
| Batch defluxing | ● | ● | ● | | | | | | | | | | | |
| Ultrasonic defluxing | ● | ● | ● | | | | | * | ● | ● | | ● | * | |
| Manual defluxing | | | | | | | | ● | ● | ● | ● | ● | ● | ● |
| Misprinted board cleaning - batch | | | | | ● | ● | | | | | | | | ● |
| Misprinted board cleaning - manual | | | | ● | ● | | | | | | | | | ● |

NOTE: Test for substrate compatibility as a part of your qualification process.

* non-heated ultrasonic only



Eco-dFluxer

Water-based Inline & Batch Flux Removers

Eco-dFluxer cleaners are water-based, environmentally friendly and designed to work in both inline and batch cleaning equipment. They are optimal combinations of solvents and saponifiers that lower surface tension for penetration under low stand-offs, and powerful cleaning action to remove all flux residues.

Effective on a wide variety of solders and fluxes: lead, lead-free, aqueous, RMA, no-clean, and new halide-free fluxes. High compatibility with common PCB metals and plastics. Eco-dFluxer cleaners are highly filterable with long bath life.

High performance cleaning gives you brilliant solder joints and allows you to increase dilution, increase line speeds, reduce waste water, decrease cost per board, and most importantly... eliminate field failures due to ionic contamination!

- **High performance cleaning**
- **Non-flammable**
- **No VOC, zero GWP**
- **Also used for pallet cleaning in batch systems**

Eco-dFluxer SMT100

Powerful defluxer, allowing you to optimize your cleaning process. Reduce concentration and increase line speed to maximize your profit. Effective on no-clean, R, RMA and OA fluxes.

- 1550-G** 1 gal. (3.8L) plastic container
- 1550-5G** 5 gal. (19L) plastic container
- 1550-54G** 54 gal. (205L) plastic drum



Eco-dFluxer SMT200



Superior metals compatibility, preventing oxidation and leaving shiny solder joints. Eco-friendly formula reduces shipping and disposal costs. Effective with reduced concentration even on the toughest no-clean, R, RMA, OA and new halide-free fluxes.

- 1520-G** 1 gal. (3.8L) plastic container
- 1520-5G** 5 gal. (19L) plastic container
- 1520-54G** 54 gal. (205L) plastic drum

Eco-dFluxer SMT300



Powerful defluxer but safe on sensitive metals, preventing oxidation and leaving shiny solder joints. Safe, eco-friendly formula. Effective on no-clean, R, RMA, OA fluxes and new halide-free fluxes.

- 1530-G** 1 gal. (3.8L) plastic container
- 1530-5G** 5 gal. (19L) plastic container
- 1530-54G** 54 gal. (205L) plastic drum

Defoamer DF1

Defoaming Agent for Inline & Batch Cleaners

Reduce foaming as cleaner becomes loaded to extend bath life. Add directly to sump at 1 to 4 fl oz. (30-120ml) per 100 gallons (379L). Dilute in spray bottle to 15% with DI water to eliminate foaming issue on the spot.

- Effective at all processing temperatures
- Extends bath life
- Silicone & particulate free
- Non-flammable

- 1555-P** 1 pt. (0.47L) plastic container



1590-KIT

Bath Analysis Kit

Use with Eco-dFluxer & Eco-Stencil AQ to determine bath concentration and bath loading. A testing protocol keeps your cleaning process in control and can help diagnose changes in cleaning performance.

- 1590-KIT** 1 Bath Analysis Kit
- 1590-ABC** Contents: Storage case, test solution, flask, graduated cylinder, dropper Solution refills

Dosatron Automatic Chemical Dispenser

Connects to the DI system and precisely meters cleaner concentrate to dilution levels between 0.5% to 20%. Eliminates the need for manual mixing and pouring, and the variability that goes along with it.

- Improves PCB reliability by keeping cleaner dilution in control
- Easy, intuitive dosing adjustment
- Water powered – no need for electrical connection

- 1595** 1 Dosatron Chemical Dispenser
- 1595-BP** 1 Dosatron Chemical Dispenser with By-Pass Valve



1595



E-LINE Flux Remover

Hydrocarbon-based defluxer formulated to be powerful, yet very economical. Eliminates brushing and scrubbing, saving time and materials.

- Powerful cleaner
- Proven effective for lead-free processes
- Ideal for sensitive plastics
- Powerful bulk cleaner
- For cold cleaning and ultrasonic (unheated only)

Specifications: GM H1013; USDA Accepted; Ford Tox #142431, USDA: Approved K-2 rated aerosol and bulk.

- | | |
|------------------|--|
| 1621-10S | 10 oz. (296ml) aerosol |
| 1621-10SB | 10 oz. (296ml) aerosol w/brush attachment |
| 1621-G | 1 gal. (3.8L) metal container |
| 1621-5G | 5 gal (19L) metal drum |
| 1621-54G | 54 gal (205L) metal drum |



IPA Electronics Cleaner



Isopropyl Alcohol (IPA) in new, convenient aerosol packaging. 99.8% pure anhydrous (minimal water) IPA is excellent for defluxing, fiber optics maintenance, stencil cleaning, tool cleaning, tape-head cleaning and other light-duty cleaning.

- 99.8% pure IPA
- Ideal for defluxing, stencil cleaning & fiber optics
- Compliant with SCAQMD rule 1171
- Plastic safe
- Low toxicity
- Non-ozone depleting

Specifications for 99.8% IPA: Fed spec TT-1-735A (amend 3, notice 2) grades A&B, ASTM D770-05

- | | |
|-----------------|------------------------|
| 1610-12S | 12 oz. (355ml) aerosol |
|-----------------|------------------------|

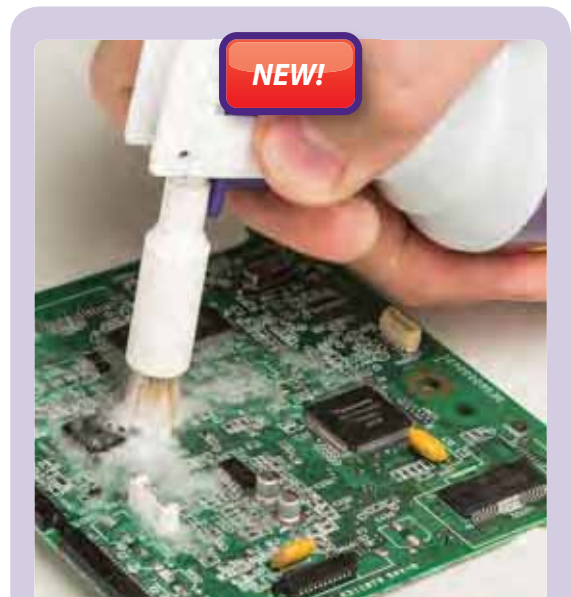


Envi-Ro-Tech™ Defluxer

Alcohol-based general duty defluxer and all-purpose cleaner for light oils, silicones, waxes, greases and other contaminants found in electronics manufacturing.

- Non-aerosol
- Safe on plastics

- | | |
|----------------|--|
| 1679-PT | 1 pt. (0.47L) in plastic bottle w/trigger sprayer |
|----------------|--|



Brush Cleaning Attachment

E-LINE and G3 flux removers (1621-10SB, 1631-5S & 1631-16SB) are now available with brush attachments. The spray heads are also compatible with another commonly available brush system.



Flux Remover

BEST SELLER!

Patented defluxer formulated to be powerful and non-flammable, yet economical. Eliminates brushing and scrubbing, saving time and materials.

- Non-flammable
- Powerful cleaner
- Proven effective for lead-free processes
- Non-ozone depleting

Specifications: B-28680, Ford Tox #167834

| | |
|------------------|---|
| 1631-5S | 5 oz. (148ml) aerosol w/brush attachment |
| 1631-16SB | 16 oz. (473ml) aerosol w/brush attachment |
| 1631-16S | 16 oz. (473ml) aerosol |



1631-16S

1631-16SB



No-Clean Flux Remover

The power of G3, but specifically formulated to prevent and clean white residues caused by no-clean fluxes.

- Non-flammable
- Ideal for no-clean fluxes
- Proven effective for lead-free processes
- Non-ozone depleting

| | |
|-----------------|------------------------|
| 1634-12S | 12 oz. (355ml) aerosol |
|-----------------|------------------------|



Universal Bulk Cleaner

Powerful, non-flammable bulk cleaner that is ideal for manual cleaning of heavy greases, silicone, and other oils, R, RA and no-clean fluxes. Also recommended for ultra-sonic cleaning.

- Non-flammable
- Powerful cleaner
- All-in-one degreaser and defluxer

| | |
|-----------------|----------------------------|
| 1638-G | 1 gal. (3.8L) glass bottle |
| 1638-5G | 5 gal. (19L) metal drum |
| 1638-54G | 54 gal. (205L) metal drum |



1638-5G

PRECISION V

Flux Remover & Maintenance Cleaner

Formulated to reduce VOCs within your facility. Ideal for aviation and other applications where strict VOC caps apply (based on EPA VOC exemptions). Bulk chemicals ideal for cold/bucket cleaning and ultrasonics (not intended for vapor degreaser).

- Non-flammable
- Low VOC
- Safe on most plastics
- High precision – residue-free
- Non-ozone depleting

| | |
|-----------------|----------------------------|
| 1651-16S | 16 oz. (473ml) aerosol |
| 1651-P | 1 pt. (0.47L) glass bottle |
| 1651-G | 1 gal. (3.8L) glass bottle |
| 1651-5G | 5 gal. (19L) metal drum |



1651-16S

PRECISION V

No-Clean Flux Remover

NEW!

Engineered with Honeywell Solstice PF solvent to cut flux residues from the most difficult to clean no-clean fluxes. Also removes R, RMA, and OA (aqueous) fluxes without leaving white residues.

- Non-flammable
- Effective on R, RMA, No-Clean & OA Fluxes
- Low global warming potential (GWP)
- Proven effective on lead-free processes
- Non-ozone depleting

| | |
|-----------------|------------------------|
| 1649-12S | 12 oz. (275ml) aerosol |
|-----------------|------------------------|



PRECISION V

Plastic-Safe Universal Cleaner

Plastic-Safe formula is engineered for use on sensitive plastic components, packaging and casements. Ideal for optics cleaning, critical electronics and other sensitive surfaces. Qualifies under the aerospace NESHAP VOC guidelines.

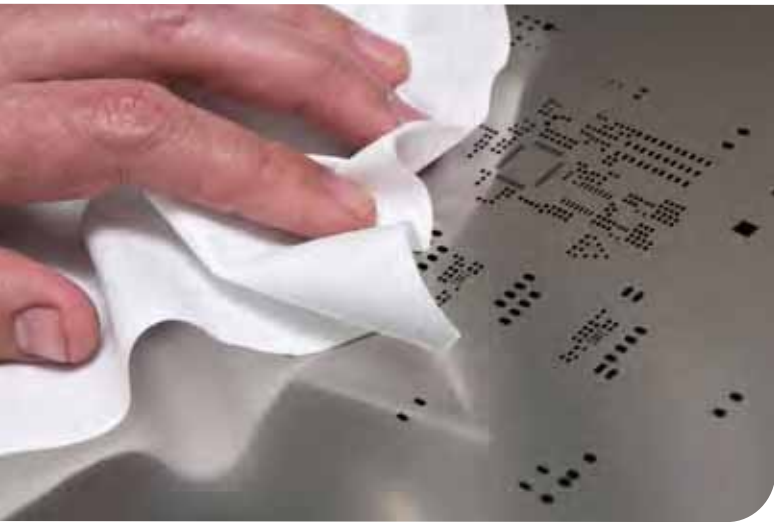
- Non-flammable
- Low VOC
- Safe on sensitive plastics
- High precision – residue-free
- Non-ozone depleting

Specifications: NESHAP 63.741-753

| | |
|-----------------|----------------------------|
| 1652-10S | 10 oz. (296ml) aerosol |
| 1652-P | 1 pt. (0.47L) glass bottle |
| 1652-G | 1 gal. (3.8L) glass bottle |
| 1652-5G | 5 gal. (19L) metal drum |



1652-10S



Isopropyl Alcohol Wipes

Techspray has the broadest line of isopropyl alcohol wipes in the industry, ranging from aerosol, pre-saturated wipes, and lint-free packs for aging. Two grades of wipes are available: 99% anhydrous containing as little water as possible for fast-drying cleaning and 7% denatured for stencil and other cleaning when slower evaporation is desired.

All pre-saturated wipes are made of low linting, tear resistant hydro-entangled polyester or poly-cellulose material.

Specs: 99% anhydrous qualified as reagent grade, fed spec TT-77 Amendment, notice grades & , TM D77

Individually Wrapped Wipes

BEST SELLER!

Ideal for cleaning and prepping surfaces on the go. Fits in tool bags and can be carried on a plane.

- Individually wrapped 7mm x 7mm wipes
- Individually wrapped 7mm x 10mm wipes
- Lint-free

1610-50PK 99% anhydrous wipes



Spring-loaded lid automatically closes

Sealed top reduces waste from dry-out

Disposable Tubs

Industry standard pop-top wipes for deflashing, degreasing, and stencil cleaning.

- Individually wrapped 7mm x 7mm pop-top wipes
- Individually wrapped 7mm x 10mm pop-top wipes
- Lint-free

1608-100DSP 7% denatured wipes
1610-100DSP 99% anhydrous wipes



1608-100DSP

Flip-Top Tubs

NEW!

Reduces waste from dry-out. Lid automatically closes after use.

- Individually wrapped 7mm x 7mm
- Individually wrapped 7mm x 10mm
- Lint-free
- Lid springs closed automatically
- Top dries out from open lids
- Eco-friendly — reduces waste & emissions

1608-100FL 7% denatured wipes
1610-100FL 99% anhydrous wipes

Refill Wipes

NEW!

Reduce your carbon footprint and save money. Replace wipes and continue to use plastic containers.

- Individually wrapped 7mm x 7mm replacement wipes fit L and D tubs
- Individually wrapped 7mm x 10mm replacement wipes/roll
- Lint-free

1608-100R 7% denatured wipes
1610-100R 99% anhydrous wipes



IPA Aerosol

NEW!

99% anhydrous in an aerosol.
1610-12S 1.7 oz. (50 ml) aerosol

See details on page 12.



Bulk Isopropyl Alcohol

70% Bulk – Cleaning Grade IPA

70% IPA, 30% DI water blend for effective and economical stencil cleaning. Slower evaporation than 99% IPA, which allows soak time for difficult to clean solder pastes and adhesives.

1608-G4 1 gal. (3.8L) plastic container, sold only 4/cs



99.8% Bulk – Technical Grade IPA

99.8% pure anhydrous (containing the least water possible) isopropyl alcohol is excellent for tape head cleaning, defluxing, stencil cleaning, other light cleaning, and as a flux thinner.

Avoid "bargain" alcohols for critical electronic cleaning. Cheap alcohols contain much more water, which slows drying and can cause oxidation.

Specifications: ACS reagent grade IPA, Fed spec TT-1-735A (amend 3, notice 2) grades A&B, ASTM D770-05.

1610-P 1 pt. (3.8L) plastic bottle
1610-PT 1 pt. (3.8L) plastic bottle w/ trigger sprayer



1610-G1 1 gal. (3.8L) plastic container
1610-G4 1 gal. (3.8L) plastic container, sold only 4/cs
1610-5G 5 gal. (19L) plastic container
1610-54G 54 gal. (205L) plastic drum



TECHSPRAY® & PLATO DISPENSING BOTTLES

TechPump Refillable Dispenser

Cap is pressed down to pump fluid into the lid. Air-tight check valve prevents evaporation, spillage, and fluid from dripping back inside and contaminating contents.

1981 1 empty 8 oz. (237ml) bottle




Brush Scrub Bottles

2 oz. (59ml). bottle with natural hog bristles that are medium to stiff and works well for removing difficult, sticky, crusty, or viscous materials.

- Inexpensive and safe method to spot clean PCB assemblies
- Compatible with IPA, Hexane, and Acetone

SB-2N 1 empty 2 oz. (59ml) bottle

SF-B2HH 1 empty 2 oz. (59ml) bottle with ESD-safe sleeve 




SF-B2HH

Plato® Liquid Dispensing Bottles

Polyethylene bottle, screw cap, and dispensing tube with 8 oz. (237ml) capacity. Inexpensive way to wet sponges and dispense liquids at the work bench without waste.

BC-250 1 empty 8 oz. (237ml) bottle

SF-250 1 empty 8 oz. (237ml) bottle with ESD-safe sleeve 



SF-250



Electronic Assembly Supplies

SMT Stencil Cleaning

Thoroughly cleaning SMT (surface mount technology) stencils, tools and equipment is an important way to reduce misprints and increase throughput. Techspray SMT stencil cleaners are designed for rigorous production requirements.



TECHSPRAY RENEW™ branded cleaners are innovative solutions that combine the best of current “green” technologies to make the most powerful green cleaners on the market.

| PROPERTIES | WATER-BASED | | | | | | | | | SOLVENTS | |
|---|-------------------|--------------------------|--------------------------|--------------------------|---------------------|---------------------|---------------------|----------------------|---------------|--------------|--------------|
| | 1502 Pine-Spinner | 1520 Eco-dFluxer SMT 200 | 1530 Eco-dFluxer SMT 300 | 1550 Eco-dFluxer SMT 100 | 1570 Eco-Stencil UM | 1571 Eco-Stencil RF | 1572 Eco-Stencil AQ | 1574 Eco-Stencil AQ2 | 1573 Eco-Oven | 1608 70% IPA | 1610 98% IPA |
| Non-flammable | ● | ● | ● | ● | ● | ● | ● | ● | | | |
| Evaporation rate - Scale 1 (fastest) to 5 (slowest) | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 2 | 1 | |
| VOC % (EPA) - Bulk | 2 | 22 | 52 | 45 | 3 | 10 | 27 | 35 | 2 | 70 | 100 |
| VOC % (CARB) - Bulk | 0 | 22 | 52 | 45 | 3 | 10 | 27 | 35 | 2 | 70 | 100 |
| APPLICATIONS | | | | | | | | | | | |
| Manual stencil cleaning | | | | ● | ● | | | | ● | ● | |
| Batch stencil cleaning | | | | | ● | ● | ● | | ● | ● | |
| Understencil cleaning | | | | ● | ● | | | | ● | ● | |
| Blade & tool cleaning | | | | ● | ● | | | | ● | ● | |
| Misprint board cleaning - batch | | | | | ● | ● | ● | | ● | ● | |
| Misprint board cleaning - manual | | | | ● | ● | | | | ● | ● | |
| Oven cleaning | | | | | | | | ● | ● | ● | |
| Wave finger cleaning | | | | | | | | ● | ● | ● | |
| Pallet cleaning - manual | | | | | | | | ● | ● | ● | |
| Pallet cleaning - batch | | ● | ● | ● | | | | | | | |
| ESD-safe surface cleaning | ● | | | | | | | | | | |
| General surface cleaning | ● | | | | | | | | ● | ● | |

SMT Understencil Roll Wipes for DEK and MPM SMT Printers

Made from low-lint fabric and designed for vacuum operation.



| Part # | OEM Brand | Equip model | Core ID | Notch | Paper Width | Core Width | Matl Length |
|----------|-----------|--------------------------------|--------------|-------|---------------|---------------|--------------|
| 2366-DEK | DEK | DEK 265, #129051/GS, GSX & 288 | 0.75" (19mm) | 1 | 20.3" (515mm) | 20.9" (530mm) | 39' (11.9 M) |
| 2367-MPM | MPM | MPM #1485/AP & UP2000 | 0.75" (19mm) | 0 | 17.5" (444mm) | 18" (457mm) | 39' (11.9 M) |

See full wipe line — Pages 34-36

Batch Stencil Cleaners

Techspray Renew Eco-Stencil cleaners have been engineered to optimize your process, allowing for faster cleaning cycles at lower concentrations.

All Eco-Stencil products have been tested and proven compatible with batch equipment, stencils, frame materials, adhesives, and stencil nano coatings.



Photo courtesy of Austin American Technology



See Bath Analysis Kit and Dosatron Automatic Chemical Dispenser on page 11.

Eco-Stencil RF

Rinse-Free Batch Stencil Cleaner

Eco-Stencil RF is an effective non-flammable drop-in replacement for isopropyl alcohol (IPA) and other solvents commonly used in rinse-free batch stencil cleaning systems. This unique solvent and DI water blend is effective at removing a wide variety of pastes and adhesives. Higher concentration can be used for more difficult pastes and adhesives.

Eco-Stencil RF does not contain ionics, and will not leave contaminants that will change downstream process windows or lead to board failures. It can also be used as a manual and under-stencil cleaner.

- Non-flammable
- Rinse-free
- Drop in replacement for IPA
- Effective at ambient temperature
- Low VOC, zero GWP
- Highly concentrated - 20% dilution

| | |
|----------------------|--|
| 1571-G | 1 gal. (3.8L) plastic container |
| 1571-5G | 5 gal. (19L) plastic container |
| 1571-15RTU-5G | 15% dilution, 5 gal. (19L) plastic container |
| 1571-54G | 54 gal. (205L) plastic drum |



Eco-Stencil AQ

Water-Based Batch Stencil Cleaner

When a water rinse is a part of the cleaning process, Eco-Stencil AQ provides an economical, yet powerful cleaning solution. This water-based cleaner uses the latest environmentally friendly surfactants to break down pastes and adhesives. Concentrated formula saves shipping and storage cost.

Drop-in replacement for semi-aqueous and aqueous cleaners. Eco-Stencil AQ is compatible with the most popular cleaning equipment and works with current filtration methods, providing a long bath life and minimized disposal cost.

- For use in batch stencil cleaners with automatic or manual rinse
- Non-flammable
- Low VOC, zero GWP
- Highly concentrated – 10% dilution

| | |
|-----------------|---------------------------------|
| 1572-G | 1 gal. (3.8L) plastic container |
| 1572-5G | 5 gal. (19L) plastic container |
| 1572-54G | 54 gal. (205L) plastic drum |



1572-G

Eco-Stencil AQ2

Water-Based Batch Stencil Cleaner

Designed with lower pH for greater compatibility with “nano” stencil coatings. Eco-Stencil AQ2 batch stencil cleaner has been tested and proven compatible with every part of your stencil — from the frame, screen and stencil to the adhesives binding it together.

- Safest on nano stencil coatings
- For use in batch stencil cleaners with automatic or manual rinse
- Effective at cleaning pastes and adhesives
- Non-flammable
- Low VOC, Zero GWP
- Highly concentrated – 10% dilution

| | |
|-----------------|---------------------------------|
| 1574-G | 1 gal. (3.8L) plastic container |
| 1574-5G | 5 gal. (19L) plastic container |
| 1574-54G | 54 gal. (205L) plastic drum |



1574-G



Eco-Stencil UM

Manual & Under Stencil Cleaner

Effectively removes all types of solder paste and uncured adhesive from screens, misprinted boards and equipment. Completely safe on stencils, squeegees, and equipment surfaces. Ideal replacement for IPA cleaners, which are often prohibited because of safety, environmental restrictions on VOC emissions, or waste disposal issues.

Convenient pre-saturated wipes available in a pop-up dispenser. Wipe material is lint-free and resistant to tearing and shredding.

- Quickly clean paste or uncured adhesive
- Safe for stencils, tools, misprinted boards
- Non-flammable
- Low VOC, zero GWP

Applications:

- Manual stencil tool, work surface, and squeegee cleaning
- Automatic underside wipe stencil cleaning
- Batch ultrasonic cleaning
- Removes unsoldered leaded & lead-free solder pastes
- Cleans off uncured adhesives

- 1570-100DSP** 100 count pre-saturated wipes, 6"x8" (15cm x 20cm)
- 1570-Q** 1qt. (0.95L) w/ trigger sprayer
- 1570-G** 1 gal. (3.8L) plastic container
- 1570-GX10** 1 gal. (3.8L) concentrate makes 10 gallons (38L)



1570-Q

1570-G

1570-100DSP

Pine-Shower

Surface & Equipment Cleaner

Leveraging the cleaning power of pine, Pine-Shower quickly removes flux residues, grease and other soils, and leaves a non-oily finish. Safe on ESD-safe mats, work benches and equipment surfaces. Does not contain butyl cellosolve, which is an unhealthy ingredient in many degreasers and surface cleaners. Free of ionics and silicones that can contaminate PCB's and lead to board failure.

- Clean flux and oils from equipment & surfaces
- Concentrated and dilutable
- Non-flammable
- pH in neutral range – non-corrosive
- Safe on most plastics and painted surfaces
- Low VOC, zero GWP

- 1502-QT** 1 qt. (0.95L) w/ trigger sprayer
- 1502-G** 1 gal. (3.8L) plastic container
- 1502-5G** 5 gal. (19L) plastic container



1502-QT

1502-G



Eco-Oven

Reflow Oven, Wave Finger & Pallet Cleaner

Cleans reflow ovens, wave soldering systems, associated heat exchanger systems, wave fingers, and solder pallets by removing all types of flux residues. Used for periodic preventative maintenance to keep equipment performing at peak levels. It is fast acting and more effective than IPA for baked-on flux residues.

- Quickly clean flux residue from oven & wave fingers
- Safe on warm ovens
- Non-flammable
- Low VOC, zero GWP

Applications:

- Removal of baked-on flux residues from SMT oven and wave equipment
- Maintenance cleaning for heat exchange systems
(NOTE: rinse thoroughly from aluminum and copper)
- Finger cleaning in wave solder equipment
- Remove accumulated flux from wave solder pallets
(NOTE: in bath system, use Eco-dFluxer - page 11)

- 1573-QT** 1 qt. (0.95L) w/ trigger sprayer
- 1573-G** 1 gal. (3.8L) plastic container
- 1573-5G** 5 gal. (19L) plastic container



1573-QT

1573-G



Wave fingers



XT-Armor™ Oven Shield

Reflow Oven & Wave Maintenance Coating

XT-Armor™ Oven Shield Reflow Oven & Wave Maintenance Coating is a water-based, environmentally friendly coating that is designed to protect PCB assembly equipment from flux residues. Flux sticks to the coating surface and then peels off – drastically reducing maintenance time.

XT-Armor Oven Shield has been tested and proven compatible with all of the most popular oven and wave equipment: BTU, Heller, JTV, SMT, Speedline and Vitronics-Soltec.

- Coating & flux residues peel off easily
- Cures during equipment heat-up cycle
- Low odor, non-hazardous, non-flammable
- Easy wash-up with water
- Environmentally friendly – zero VOC, zero GWP
- Halide-free – prevent ionic contamination

Applications:

- Protect cooling zones of reflow oven
- Coat around wave fluxer
- Coat top of wave pallet
- Mask overspray area in coating spray booth



- 3601-165Q** 16oz. (0.47L) squeeze bottle
- 3601-G** 1 gal (3.8L) plastic jug
- 3610-1** 1000ml Application Cup
- 3611-1** 2" Application Brush
- 3601-KIT** Contents: (2) 3601-165Q, (1) 3610-1 and (1) 3611-1



PROBLEM: Cleaning requires over 8 hours of machine downtime and man hours, with harsh chemicals, brushes and scrapers.



SOLUTION: Flux contamination simply peels off, reducing downtime by 25% and labor by 50%.



Conformal Coating

Techspray offers a variety of coating formulas to match field and engineering requirements. Specifications generally depend on the type of protection needed: e.g. thermal, moisture, and static resistance (see reference chart below).

Application method is also an important consideration:

Dip – High volume method to fully coat boards. Thickness of final coating is controlled by viscosity and withdrawal speed from the pot.

Selective spray system – Computer controlled selective spray systems, eliminate the need for masking. Higher viscosity than full coverage sprayer is generally needed (70-200 cps) to create precise edge definition and prevent splattering.

Manual Application – Aerosol and brushing are generally used for small production runs, rework and repair. If using for rework, the aerosol needs to be compatible with the original coating.

CONFORMAL COATING SELECTION GUIDE

Key: ● = Best ● = Acceptable ○ = Not applicable / Not recommended

| | 2108 Turbo-Coat | 2109 Turbo-Coat HV | 2151 Fine-L-Kote AR | 2102 Fine-L-Kote SR | 2102 HV Fine-L-Kote SR | 2106 Fine-L-Kote HT | 2104 Fine-L-Kote UR | 2104 HV Fine-L-Kote UR |
|----------------------------------|------------------------------|------------------------------|--------------------------------|--|--|-----------------------------|--|--|
| Product Benefits | Economical With Fastest Cure | Economical With Fastest Cure | Economical With High Viscosity | Moisture & Vibration Resistant | Moisture & Vibration Resistant | High Operating Temperature | Durable & Chemically Resistant | Durable & Chemically Resistant |
| Selective Spray System | ○ | ● | ● | ○ | ● | ● | ● | ● |
| Atomized Spray System | ○ | ● | ● | ○ | ● | ○ | ○ | ○ |
| Dip | ● | ● | ● | ● | ● | ● | ● | ● |
| Aerosol Available | YES | USE 2108-12S | NO | YES | USE 2102-12S | YES | YES | Use 2104-12S |
| Thermal Resistant | ○ | ○ | ○ | ● | ● | ● | ○ | ○ |
| Moisture /Fungus Resistant | ○ | ○ | ○ | ● | ● | ● | ● | ● |
| Chemical Resistant | ○ | ○ | ○ | ● | ● | ● | ● | ● |
| Vibration Resistant | ○ | ○ | ○ | ● | ● | ● | ○ | ○ |
| Ease of Rework | ● | ● | ● | ● | ● | ● | ○ | ○ |
| Cure Type | THERMAL / AIR | THERMAL / AIR | THERMAL / AIR | THERMAL / AIR | THERMAL / AIR | THERMAL / AIR | THERMAL / AIR | THERMAL / AIR |
| Tack Free Time (minutes) | 3 | 9 | 30 | 60 | 60 | 45 | 15 | 15 |
| Accelerated Cure Time/Temp | 1 Step 20 Min.@ 65°C | 1 Step 55 Min.@ 55°C | 1 Step 70 Min.@ 80°C | 2 Step 30 Min.@ 32°C 45 Min.@ 93°C | 2 Step 30 Min.@ 32°C 45 Min.@ 93°C | 1 Step 15 Min.@ 49°C | 2 Step 20 Min.@ 49°C 30 Min.@ 82°C | 2 Step 20 Min.@ 49°C 30 Min.@ 82°C |
| Ambient Cure Time Mil-I-46058C / | <15 Hrs. | <15 Hrs | 24 Hrs. | 72 Hrs. | 72 Hrs. | 24 Hrs. | 24 Hrs. | 24 Hrs. |
| IPC-CC-830 Qualified | YES | YES | Yes | YES | YES | | YES | YES |
| UL 94 Rated | V-0 | V-0 | HB | V-0 | V-0 | | V-0 | V-0 |
| Solids Content (% by weight) | Aerosol 7% Bulk 17% | Bulk 24% | Bulk 30% | Aerosol 11% Bulk 14% | Bulk 55% | Aerosol 16% Bulk 25% | Aerosol 7% Bulk 20% | Bulk 40% |
| Viscosity (centipoise) | Aerosol 10-20 Bulk 15-25 | Bulk 55-60 | Bulk 200-250 | Aerosol 4-10 Bulk 4-10 | Bulk 70-80 | Aerosol 15-25 Bulk 15-25 | Aerosol 12-22 Bulk 10-20 | Bulk 100-170 |
| UV Indicator | YES | YES | YES | YES | YES | YES | YES | YES |
| Operating Temp Range | -65° to 125° C | -65° to 125° C | -65° to 125° C | -65° to 200° C | -65° to 200° C | -40° to 350° C | -30° to 121° C | -30° to 121° C |
| Dielectric Strength | 1 kV/Mil | 1 kV/Mil | 1.5 kV/Mil | 1.1 kV/Mil | 1.1 kV/Mil | 560 V/Mil | 380 V/Mil | 380 V/Mil |
| Dielectric Constant | | | | 2.66 | 2.66 | 2.5 | 3.8 | 3.8 |
| Insulation Resistance (ohms) | 4.89 x 10 ¹⁶ | 4.89 x 10 ¹⁶ | 4.77 x 10 ¹² | 6.87 x 10 ¹⁵ | 6.87 x 10 ¹⁵ | 1.33 x 10 ¹⁶ | 1.78 x 10 ¹⁶ | 1.78 x 10 ¹⁶ |
| VOC | Aerosol 33% Bulk 64% | Bulk 7% | Bulk 70% | Aerosol 46% Bulk 58% | Bulk 46% | Aerosol 51% Bulk 79% | Aerosol 52% Bulk 80% | Bulk 60% |

Match Coating With Intended Environment:

Techspray offers a variety of coating formulas to match field and engineering requirements. Specifications generally depend on the type of protection needed.



Consumer Electronics



Automotive Electronics

Acrylic (AR) — Acrylic coatings offer good moisture protection and some of the best dielectric properties available. They are not chemically resistant, so can be partially or fully dissolved by common solvents. Ideal for:

- Automotive
- Consumer electronics
- Appliance controls
- Industrial controls



Transit Electronics



Photovoltaics

Silicone (SR) — Silicone coatings have superior moisture protection, great dielectric strength, flexibility, and resistance to thermal shock. Ideal for:

- Railway electronics
- Appliance controls
- LED signage
- Ruggedized electronics



Military Equipment



Aviation Electronics

Urethane (UR) — Urethane coatings are rigid and hard, providing good moisture resistance and the best chemical resistance. Ideal for:

- Aviation
- Aerospace
- Petrochemical meters & sensors



Fine-L-Kote™ High Viscosity AR Acrylic Conformal Coating

NEW!

Innovative acrylic conformal coating that gives PCB assemblers a wider process window and greater flexibility in their coating operation. High viscosity allows operators to use as-is for dipping, or to thin down for spray systems. This coating is tested and approved in Asymtek and PVA selective spray systems, both atomized and airless models. Designed with high solids content to maximize coating thickness and reduce production time.

Can be thinned to meet production requirements using Techspray Conformal Coating Thinners (2105 or 2110). Conformal Coating Remover (2510) is also available for rework and repair, although coating can be burnt through in the soldering process for spot repairs.

- Process flexibility – ideal for spray or dip processes
- Thick coating – one-pass application
- Non-flammable final coat
- Fast & easy rework & repair
- UV indicator for black light QC inspection

Applications: Electronic Assemblies for...

- Automotive
- Consumer electronics
- Appliances
- Industrial meters & controls

Specifications: Meets or exceeds MIL-I-46068C Type AR and IPC-CC-830B. UL94 HB rated.

| | |
|-----------------|----------------------------|
| 2151-P | 1 pt. (0.47L) glass bottle |
| 2151-G | 1 gal. (3.8L) metal bottle |
| 2151-5G | 5 gal. (18.9L) metal pail |
| 2151-54G | 54 gal. (204L) metal drum |



2151-G

2151-5G

FINE-L-KOTE UR

Urethane Conformal Coating

Rigid and hard coating, providing good moisture resistance and the best chemical resistance. NASA testing has shown that urethane can slow tin whisker growth.

- Thermal resistance – to 248°F (120°C)
- Dielectric strength – 380 volts/mil
- Moisture resistant
- Chemically resistant
- Abrasion resistant
- UL94 V-0 – non-flammable final coat

Specifications: Meets or exceeds MIL-I-46058C
Type UR and IPC-CC-830. UL94 V-0 rated.

Standard Viscosity — 10-20 CPS

- 2104-12S** 12 oz. (355ml) aerosol
- 2104-G** 1 gal. (3.8L) metal can
- 2104-5G** 5 gal. (19L) metal pail



2104-12S

High Viscosity — 100-170 CPS

- 2104-GHV** 1 gal. (3.8L) metal can
- 2104-5GHV** 5 gal. (19L) metal pail



FINE-L-KOTE SR

Silicone Conformal Coating

Superior moisture protection, great dielectric strength, flexibility, and resistance to thermal shock. Although more chemically resistant than acrylic, silicone can still be easily cleaned and reworked using common solvents. Silicone is often used in outdoor applications for maximum environmental protection. Flexibility makes silicone ideal when there is a great deal of vibration, because it avoids cracking.

- UL recognized
- Thermal resistance — to 392°F (200°C)
- Dielectric strength — 1100 volts/mil
- Moisture resistant
- Chemically resistant
- Vibration resistant — flexible

Specifications: Meets or exceeds MIL-I-46058C
Type SR and IPC-CC-830. UL File Number E95150.

Standard Viscosity — 4-10 CPS

- 2102-12S** 12 oz. (355ml) aerosol
- 2102-P** 1 pt. (0.47L) glass bottle
- 2102-G** 1 gal. (3.8L) metal can
- 2102-5G** 5 gal. (19L) metal pail

High Viscosity — 60-90 CPS

- 2102-GHV** 1 gal. (3.8L) metal pail



2102-12S

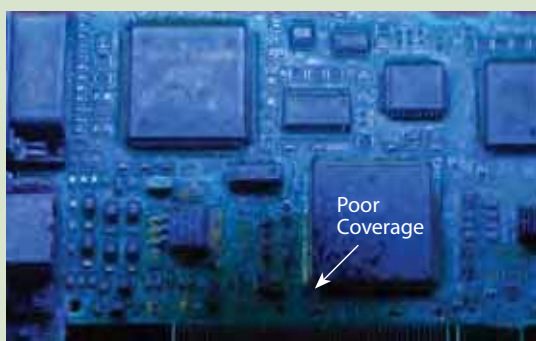
Fine-L-Kote Thinner

Techspray Fine-L-Kote coatings (AR, UR, SR, and HT) can be thinned to meet production requirements using Fine-L-Kote Thinner. This is a common solution for cobwebbing in a spray system and thickening in a dip system.

- 2105-G** 1 gal. (3.8L) metal can



2105-G



Opti/Scan for UV inspection

Techspray coatings contain Opti/Scan to allow quality control inspection of coverage and evenness of the coating on a PCB. A coated board can be passed under a standard black light (long-wave UV, 400nm) and the coated areas glow. The brighter the glow, the thicker the coating.

FINE-L-KOTE HT

High-Temperature Silicone Conformal Coating

High-Temperature Silicone Coating is designed to prevent thermal break-down at high temperatures. Silicone Conformal Coating is the most universal coating, offering protection for a wide variety of environments.

- Designed for high temperature environments
- Fast-drying silicone – 1-step process
- Thermal resistance – to 662°F (350°C)
- Dielectric strength – 560 volts/mil
- Moisture resistant
- Vibration resistant – flexible

Specifications: Meets or exceeds MIL-I-46058C
Type SR and IPC-CC-830.

- 2106-12S** 12 oz. (355ml) aerosol
- 2106-G** 1 gal. (3.8L) metal can



2106-12S



Temporary Solder Masks

Techspray's WonderMASK is the industry leading temporary solder mask brand because of quality and versatility. Depending on the product, mask can be peeled off manually, or washed off in a batch or inline system. WonderMASK has a number of useful applications in PCB assembly:

Thru-hole masking – Prevent soldering open holes in a wave soldering process by covering with WonderMASK. All of the masks listed below are well suited for this application.

Conformal coating masking – In a conformal coating dipping or spraying process, WonderMASK can be used to cover connectors and other components and areas that should not be coated. WonderMASK P and PX are recommended.

Temporary component adhesive – WonderMASK can be used to tack down components on double-sided PCB's. WonderMASK WSOL is recommended.

All Techspray WonderMASK products have the following advantages:

- Can be cured in pre-heat
- Withstands lead-free soldering temperatures up to 640°F (343°C) in wave soldering process
- RoHS compliant

WonderMASK PX

Natural latex peelable solder mask with fastest cure time.

NEW!

Natural latex temporary solder mask that is specially formulated to cure in half the time of other masks.

WonderMASK PX cures over its entire surface area, including where it adheres to the PCB. This allows it to be peeled quickly and easily when other masks are still sticky at the bottom. Even the thickest bead of mask cures completely.

- Fastest full cure
- Easily peelable
- Highest strength to avoid breakage
- Non-flammable

Specifications: Meets MIL-STD-2000 paragraph 5.3.18 parts a, b, and d.

- 2222-85Q** 8 oz. (237ml) squeeze bottle
- 2222-G** 1 gal. (3.8L) in plastic jug
- 2222-5G** 5 gal. (19L) in plastic pail



2222-85Q



WonderMASK PX peels after 15 min.

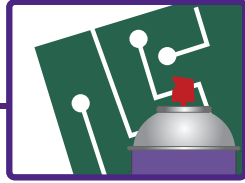
Typical mask after 15 min.

TEMPORARY SOLDER MASK SELECTION GUIDE

| PRODUCT | APPLICATION | VISCOSITY | SUGGESTED THICKNESS | THINNER | CURE TYPE | CURE TIME | REMOVAL |
|----------------------|------------------------------------|---------------------|---------------------|------------|-------------|---|---|
| PEELABLE | | | | | | | |
| 2211 WonderMASK P | Template, Hand, Pneumatic, Robotic | 28,000 – 30,000 cps | 20 – 30 mils | D.I. Water | Thermal/Air | 1 hr. Ambient 30 min. @65° C 20 min. @82° C | Peel off. Dried Mask is not soluble in liquids |
| 2222 WonderMASK PX | Hand Applied | 9,000 – 16,000 cps | 15 mils | D.I. Water | Thermal | 15 min. Ambient | Peel off. Dried Mask is not soluble in liquids |
| WATER-SOLUBLE | | | | | | | |
| 2204 WonderMASK WSOL | Hand, Pneumatic | 11,500 – 15,500 cps | 5 – 30 mils | Methanol | Thermal | 30 min. @65° C | Soluble in Water 49° C or higher |
| 2205 WonderMASK W | Hand Applied | 9,000 – 10,000 cps | 10 – 15 mils | D.I. Water | Thermal | 30 min. @80° C 1-2 hrs. Ambient | Soluble in Water 49° C or higher |
| 2206 WonderMASK W | Pneumatic, Robotic | 6,050 – 6,450 cps | 10 – 15 mils | D.I. Water | Thermal | 1-2 hrs. Ambient 30 min. @80° C | Soluble in Water 49° C or higher |

Peelable Masks

Used with solvent cleaning and no-clean processes.



WonderMASK P

Techspray's original ammonia-free synthetic latex peelable solder mask.

- Easily peelable
- Low odor
- Cure indicator – darkens as it cures
- Compatible with gold and copper leads
- Non-corrosive
- Non-flammable

Specifications: MIL-STD-2000 paragraph 5.3.18 parts a,b, and d. Ford Tox #039772.

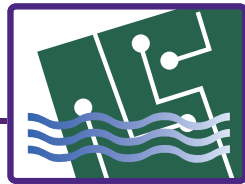
- 2211-85Q** 8 oz. (237mL) squeeze bottle
2211-G 1 gal. (3.8L) plastic pail
2211-5G 5 gal. (19L) plastic pail
2211-54G 54 gal. (205L) plastic drum



2211-85Q

Washable Masks

Used with aqueous cleaning processes.



WonderMASK WSOL

Ideal water-washable mask for closed-loop systems. Quickly and easily removed with in-line and batch cleaning system

- 100% Water-soluble
- Safe on ion beds & filters in closed-loop cleaning systems
- Non-corrosive
- Low odor

- 2204-85Q** 8 oz. (237mL) squeeze bottle
2204-G 1 gal. (3.8L) plastic pail



2204-85Q

WonderMASK W

Quick drying water-washable mask. Quickly and easily removed with in-line and batch cleaning systems.

Note: do not use in closed-loop wash systems.

- Water washable
- Non-corrosive
- Low odor
- Non-flammable

Specifications: Meets MIL-STD-2000 paragraph 5.3.18 parts a,b, and d. (2206) HP 8500-4214

Hand Applications:

- 2205-85Q** 8 oz. (237mL) squeeze bottle
2205-G 1 gal. (3.8L) plastic jug

Robotic & Pneumatic Applications:

- 2206-G** 1 gal. (3.8L) plastic jug



2205-85Q

kester® Peelable Masks

Kester peelable masks are high-temperature flexible solder masking compounds specially formulated of natural latex rubber. Kester peelable masks prevent solder from flowing into contacts, terminals, screw heads and plated through holes.

Latex has been chemically enhanced so that it is heat stable enough for wave soldering processes. Kester peelable masks effectively mask and protect the board from the time it is manufactured, through all assembly and reflow operations.

NOTE: Not recommended on bare copper because ammonia may cause discoloration.

Techform TC-527 Peelable Solder Mask

- Fast cure
- Easily peelable
- Will not tarnish gold or phosphor bronze
- Protects delicate components
- Non-flammable

- 53-4001-0527**
1 pt. (0.47L) squeeze bottle

- 53-4003-0527**
1 gal. (3.8L) plastic jug



53-4001-0527

53-4003-0527

Techform TC-533 Peelable Solder Mask

- Fast cure
- Easily peelable
- Will not tarnish gold or phosphor bronze
- Protects delicate components
- Non-flammable

- 53-4001-0533**
1pt. (0.47L) squeeze bottle

- 53-4003-0533**
1 gal. (3.8L) plastic jug

- 53-4004-0533**
5 gal. (19L) plastic pail



53-4001-0533

53-4003-0533

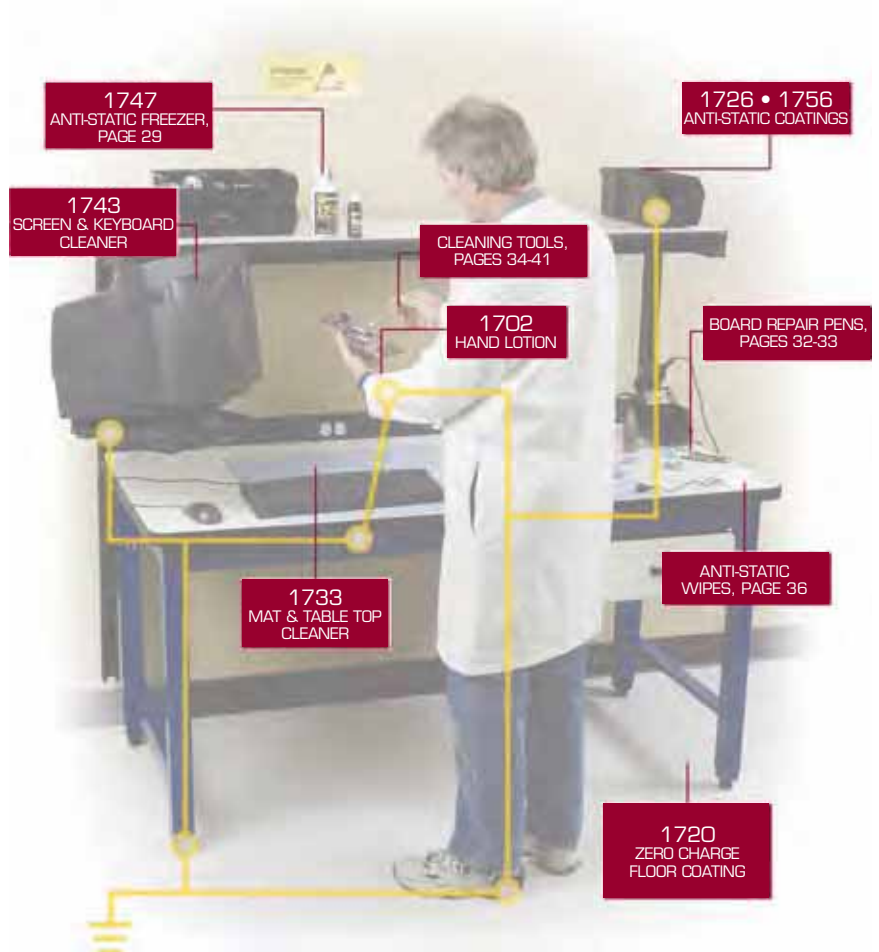
ESD Products

Techspray Maintains ESD Protected Areas

Techspray's ESD-safe products can help maintain work areas within the ANSI/ESD-S20.20 standards set by the ESD Association. In a static-free environment, the work area, tools and personnel form a circuit.

Electrostatic Discharge (ESD) occurs when the charges of two surfaces with a large electronic potential (difference) equalize instantaneously. The resulting discharge or spark can cause catastrophic or latent damage to electronic components. ESD programs maintain an equal potential by maintaining continuous contact with ground, avoiding ESD damage.

Cleaners, lotions, and coatings are an integral part of an ESD control program.



ESD-Safe Freeze Spray



ESD-safe freeze spray (1747), used for diagnostic testing, can be found on page 29.



1747-10S

Floor Care

Zero Charge® ESD-Safe Floor Coating

Converts any sealed floor to an ESD-safe surface with resistivity between 10^6 to 10^{10} . High gloss finished for use in electronic production areas, computer rooms, hospitals, and other areas with static sensitive equipment.

- Resistivity between 10^6 To 10^{10}
- Effective in low humidity
- High gloss polymer
- Zinc free
- Slip resistant

Specifications: General Dynamics, Boeing Aircraft (BAC5485), Unisys, NFPA 56A, USDA Approved.

1720-G 1 gal. (3.8L) plastic jug (coats @1,200 ft²)

1720-5G 5 gal. (19L) plastic pail (coats @6,000 ft²)

1720-54G 54 gal. (205L) plastic drum (coats @64,800 ft²)



1720-G

Floor Coating Instructions:

With a new mop and clean pails, apply coating as follows:

1. Apply thin coat to floor, i.e. $\frac{3}{4}$ way down on the ringer. Let dry to touch, approximately 45 – 60 minutes.
 2. Apply a second coat, approximately $\frac{1}{2}$ way down on the ringer.
- Note: Two coats only are recommended for conductive tile.*
3. If a third coat is applied, wait 24-hours after previous coat.

If a third coat is applied, wait 24-hours after second coat before applying. After at least a 6-hour wait, buff the floor with a white pad to harden and polish the coating.

Zero Charge Hand Lotion

Improves contact between personnel and grounding devices such as wrist straps and heel straps. Does not contain silicone, lanolin, mineral oil and other materials found in conventional hand lotions that can interfere with PCB manufacturing. Blend of moisturizers, aloe vera, and vitamins A and E penetrate rapidly leaving skin soft without a greasy film.

- Improves wrist and heel strap contact
- Does not contain silicone or lanolin
- Non-contaminating — does not interfere with soldering
- Non-greasy

Specifications: Desco C000382015
1702-8FP - HP9300-1731
1702-G - HP9300-6148, AT&T Com Code #406359406

- 1702-8FP** 8 oz. (237ml) plastic bottle with finger pump
1702-G 1 gal. (3.8L) plastic bottle



1702-8FP

Zero Charge Screen & Keyboard Cleaner

Removes hand oils, ink marks, dust, and other contaminants from computer equipment. With regular use, cleaner will eliminate static charge from sensitive surfaces and provide long-term static protection.

Note: not intended for non-glare surfaces like on LCD monitors (for LCD cleaning, go to page 6).

- Cleans plastic & glass
- Leaves ESD-safe coating
- Leaves no insulative film
- Non-flammable
- Non-corrosive

Specifications: Meets or exceeds MIL-B-81705B, NFPA 56A

- 1743-50PK** 50 pre-saturated wipes in packets
1743-QT 1 qt. (.95L) plastic bottle w/trigger sprayer



1743-50PK

Zero Charge Anti-Stat Coating

Fast drying, anti-static coating eliminates static charge and reduces triboelectric generation from flexible surfaces. Ideal for plastics, fabrics, and carpet.

- All-purpose static control
- For plastics, fabrics, and carpet
- Fast drying
- Non-flammable

Specifications: Meets or exceeds MIL-B-81705B, NSN 6850-01-324-4682, Delco C00013781, NFPA 56A. USDA: approved A-4 rated.

- 1726-QT** 1 qt. (.95L) plastic bottle with trigger sprayer



Zero Charge Mat & Tabletop Cleaner

Clean flux and other residues off of ESD-Safe mats and tabletops. Will not dry out surfaces (i.e. IPA) or leave insulative waxes (i.e. household cleaners).

- Rejuvenates ESD-safe mats
- Will not dry out surfaces
- Leaves no insulative film
- Non-flammable
- No ammonia
- Non-corrosive

Specifications: 1733-QT - AT&T Com Code #406359414
1733-G - HP 9300-1921

- 1733-QT** 1 qt. (.95L) plastic bottle w/trigger sprayer
1733-G 1 gal. (3.8L) plastic jug
1733-5G 5 gal. (19L) plastic pail



1733-QT

LICRON CRYSTAL

Permanent ESD Coating

Versatile, clear urethane coating that adheres to metal, plastic, and most other surfaces. Ideal for converting standard bumpers, bins, tools, and surfaces to ESD-safe, saving expensive replacement cost. The end result is compliant with ANSI/ESD-S20.20, which prevents static damage to sensitive electronic components.

- Rugged static dissipative coating
- Surface resistivity of 10^6 To 10^9 ohms
- Operating temperature range – up to 302°F (155°C)
- Humidity independent
- Superior adhesion to variety of surfaces: glass, plastic, etc.
- Non-ozone depleting

- 1756-8S** 8 oz. (237ml) aerosol (coats @200ft²)
1756-G 1 gal. (3.8) plastic jug



1756-8S



Rework & Repair

For over 40 years, Techspray has been offering cutting-edge products for rework and repair of electronics. Starting with Blue Stuff, a contact cleaner for TV tuners, Techspray has continued to innovate to make the job faster, more efficient, and higher precision.



Freezer

Freeze sprays are available with standard non-flammable refrigerant and with an anti-static additive to prevent static build-up. New Eco-Freezer uses an innovative low global warming material for minimal environmental impact.

Desoldering Braid

Techspray is one of the top names in wick, with fast desoldering action to speed up your rework process. No-Clean wick leaves a minimal amount of flux residue that does not need to be cleaned. A wide variety of sizes are available for every application.

Rework & Repair Pens

TraceTech pens streamline trace and resist repair, eliminating the need for cumbersome jumpers. Broken traces can be repaired in minutes with a silver conductive pen, followed by a green overcoat pen. Loose pads can be reattached with TechHold "super glue" adhesive.

PLATO® Tips & Tools

Plato tips and tools are available from Techspray. A wide variety of Plato replacement tips are available for Weller, Hakko and Pace soldering stations, improving performance with faster heat recovery and longer tip life. Plato shear cutters are high precision tools at an economical price. See the Plato catalog or www.techspray.com for more information.

Freeze Spray

Freeze sprays are fast evaporating liquids that super-chill isolated areas. Used as a troubleshooting aid for intermittently failing capacitors, resistors, semiconductors, and other defective components. They also increase visibility of cold solder joints, cracks in printed circuit boards and oxidized connections.

- Non-flammable
- Safe on plastics
- Zero residue
- Moisture free
- Non-ozone depleting
- Empty



Freeze spray helps locate faulty components and cold solder joints.

Freeze Spray

Pure HFC-134a freeze spray

- Kills down to -60°F (-51°C)
- Non-flammable
- Safe for energized equipment

Specifications: Ford To #000000, M M 0009900, McDonnellDo格拉斯 0000670000, #6000000600670000

- 1672-10S** 6 oz. 96ml aerosol
- CAN1672-10S** 6 oz. 96ml aerosol for Canada
- 1672-15S** 6 oz. 96ml aerosol



Anti-Static Freeze Spray

ESD-Safe Diagnostic Freeze Spray

Contains additive that avoids static buildup, critical when working with D-sensitive components.

- Voids static buildup
- Prevents latent failures
- Kills down to -60°F (-51°C)
- Non-flammable

- 1747-10S** 6 oz. 96ml aerosol
- CAN1747-10S** 6 oz. 96ml aerosol for Canada

See Full ESD Line — Pages 26-27



Eco-Freezer

Eco-Friendly Freeze Spray

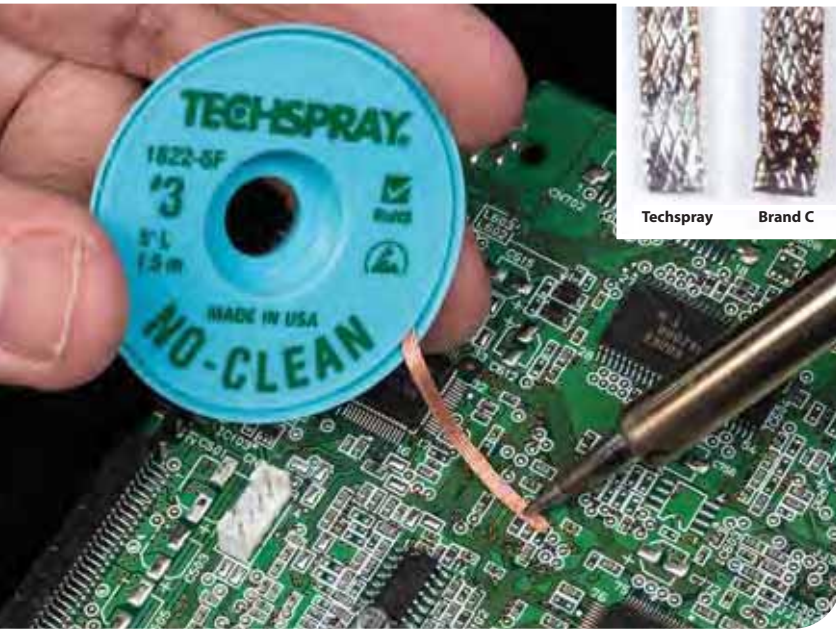
Eco-freezer is formulated with neoprene propellant, with a fraction of the global warming potential of standard freeze sprays. Eco-freezer is a drop-in replacement – non-flammable, odorless, low toxicity, and similar temperature.

Eco-freezer has a GWP of 6, compared to standard with a GWP of 1000.

- Less than 1/100th of standard
- Non-flammable
- Non-ozone depleting

- 1583-10S** 6 oz. 96ml aerosol





Desoldering Braid

Desoldering braid (wick) is pre-fluxed copper braid that is used to remove solder, which allows components to be replaced and excess solder to be removed.

Techspray wick is available in static dissipative bobbins (except where indicated) for static sensitive environments.

Techspray No-Clean wick is coated with proprietary flux that only leaves a slight clear residue, which does not cause service issues. Cleaning after using Techspray No-Clean wick is strictly optional.

Specifications: Meets or Exceeds MIL-F-14256; NASA NHB 5300, 4 (34-1); NASA NPC 200-4; NASA SP5002; 1821:HP 8690-0588; 1823: HP 8690-0577; IPC Standard-J-STD-004

No-Clean Wick quickly removes solder without leaving harmful residues.

DESOLDERING BRAID SELECTION CHART

| #1 White | #2 Yellow | #3 Green | #4 Blue | #5 Brown | #6 Red | Match width to contact area |
|------------------|------------------|------------------|------------------|------------------|------------------|-----------------------------|
| .035" (0.9mm) | .055" (1.4mm) | .075" (1.9mm) | .098" (2.5mm) | .130" (3.3mm) | .193" (4.9mm) | |

Wick in selection chart shown actual size.

Pro-Wick® Rosin — ESD-Safe Bobbin

For the fastest wicking action, rosin flux coated braid is ideal for high volume PCB production/repair environments.

| | Size/Color | 5' | 10' | 25' | 100' | 500' |
|------|------------|---------|----------|----------|------------|------------|
| 1808 | #1 White | 1808-5F | 1808-10F | — | 1808-100F | — |
| 1809 | #2 Yellow | 1809-5F | 1809-10F | 1809-25F | 1802-100F* | 1802-500F* |
| 1810 | #3 Green | 1810-5F | 1810-10F | 1810-25F | 1803-100F* | 1803-500F* |
| 1811 | #4 Blue | 1811-5F | 1811-10F | 1811-25F | 1804-100F* | 1804-500F* |
| 1812 | #5 Brown | 1812-5F | — | — | — | — |
| 1813 | #6 Red | 1813-5F | — | — | 1806-100F* | — |

* 100' and 500' products listed are not packaged in ESD-safe spools.



Soldering Tips

Plato is one of the largest manufacturers of soldering tips in the world, producing tips to fit many of the most popular soldering stations. The long life and fast heat recovery of Plato soldering tips increases soldering effectiveness and decreases production times.

- Longer Tip Life
- Faster Heating
- Lower Cost

Tip Shapes



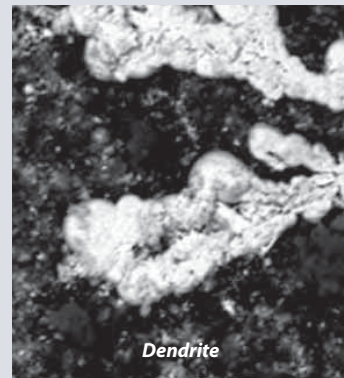
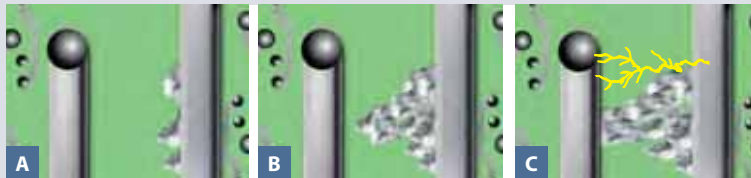
Tip Crosses

| BRAND | ORIGINAL TIP# | PLATO# |
|--------|---------------|-----------|
| Weller | XT series | XT series |
| | ET series | EW series |
| | LT series | MS series |
| | PT series | C series |
| Hakko | T18 series | HS series |
| Pace | 1121 series | 33 series |

Go to www.platoproducts.com for extensive list of available tips.


Prevent Latent Failures

Techspray No-Clean wick does not leave behind ionic flux residues that can collect and form branches called “dendrites.” Other fluxes, if not cleaned properly, can cause dendrites that grow over time (see A, B) and eventually cause short circuits between traces or leads (C). Latent failures lead to costly returns and lower the quality perception of your products.



No-Clean Wick — ESD-Safe Bobbin

The cleanest No-Clean braid in the industry. The proprietary flux formula is specially designed to avoid catastrophic and latent PCB failures caused by ionic flux residue.




| | Size/Color | 5' | 10' | 25' | 50' | 100' |
|------|------------|---------|----------|----------|----------|------------|
| 1820 | #1 White | 1820-5F | 1820-10F | 1820-25F | 1820-50F | 1814-100F* |
| 1821 | #2 Yellow | 1821-5F | 1821-10F | 1821-25F | 1821-50F | 1815-100F* |
| 1822 | #3 Green | 1822-5F | 1822-10F | — | 1822-50F | 1816-100F* |
| 1823 | #4 Blue | 1823-5F | 1823-10F | 1823-25F | — | 1817-100F* |
| 1824 | #5 Brown | 1824-5F | — | 1824-25F | — | — |
| 1825 | #6 Red | 1825-5F | — | — | — | — |

* 100' products listed are not packaged in ESD-safe spools

Unfluxed Wick — ESD-Safe Bobbin

For customers who use water-soluble flux, or their own flux for aqueous processes.



| | Size/Color | 5' | 10' |
|------|------------|---------|----------|
| 1830 | #1 White | — | 1830-10F |
| 1831 | #2 Yellow | — | 1831-10F |
| 1832 | #3 Green | 1832-5F | — |
| 1833 | #4 Blue | — | 1833-10F |



CUTTERS

Plato 170LX

Advanced design for day long comfort

The 170LX and the 175LX are remarkable advancements in cutter design. Carefully crafted precision cutting blades combine seamlessly with curved, palm shaped handles to deliver effortless lead cutting and user comfort.

Go to www.platoproducts.com for more information

Ergonomic, ESD-Safe Lead Cutter

- Comfortable, ergonomic design
- ESD-safe to protect sensitive components
- Responsive spring-back action for quick, comfortable cutting of multiple leads
- Thin profile design to reach tight areas in electronics assembly
- 175LX available with a permanently attached safety guard to reduce the risk of lead fly-off

170LX Ergonomic, ESD safe lead cutter
175LX Includes safety guard



170LX

Board Repair Pens



Easy 3 Step Process For Board Repair

TraceTech™ board repair system allows any level of technician to quickly perform quality board repairs in-house without the use of expensive equipment or time-consuming and unsightly jumpers. Meets IPC board repair standards. Other TraceTech pens are available to allow quick, convenient, and high quality board repair and rework.

Step 1

Flux Remover Pen (2506-N)



Work tip over the area to be cleaned until fluxes, contaminants and soils are removed.

Step 2

Conductive Pen (2505-N)



Repair traces and link components with silver conductive ink.

Step 3

Overcoat Pen (2509-GN)



After conductive trace is cured, use the Overcoat Pen for the protection of repaired trace.

Conductive Pen

Contains a fast drying, silver filled ink designed to quickly make highly conductive silver traces.

- Repairs traces
- Makes smooth jumpers

Specifications: Meets IPC Standard 7711 and ANSI J Standard 001C for circuit board repair and rework.

2505-N Single-pack of 4.9 ml pen



Flux Remover Pen

Provides convenient touch-up cleaning of flux residues. Cleans R, RMA, SA, and no-clean fluxes.

- Safe on plastics
- Rapid evaporation
- Pen tip allows controlled application

Specifications: Meets IPC Standard 7711 and ANSI J Standard 001C for circuit board repair and rework.

2506-N Single-pack of 11.5 ml pen



No-Clean Flux Dispensing Pen

Resin and halide-free no-clean flux has excellent wetting abilities and leave no problematic residues. Excellent for prototyping, rework, and repair and to provide extra wetting for lead-free wire solder.

- Excellent wetting
- Works with lead and lead-free solders
- No cleaning necessary
- Boost wetting for lead-free wire solder

Specifications: Meets IPC Standard 7711 and ANSI J Standard 001C for circuit board repair and rework.

2507-N Single-pack of 11.5 ml pen
2507-N100 144 pack of 11.5 ml pens, 12 boxes of 12



Overcoat Pen

Green acrylic conformal coating insulates circuit board traces and components against high voltage arcing. Provides excellent protection from moisture and fungus.

- Repairs solder resist
- Green to match resist
- Prevents shorting and arcing
- Contains Opti/Scan for UV inspection

Specifications: Meets IPC Standard 7711 and ANSI J Standard 001C for circuit board repair and rework.

2509-GN Single-pack of 5 ml pen



Conformal Coating Remover Pen

Quickly and precisely removes most conformal coatings including acrylic, urethane, and silicone.

- Fast stripping action
- Non-corrosive
- Rapid evaporation

2510-N Single-pack of 10 ml pen

Also available:

2510-P 1 pt. (0.47L) in metal bottle



Tech Hold® Adhesive

General purpose, single component cyanoacrylate adhesive exhibits high strength, fast bonding and high impact holding. Having a medium viscosity, Tech Hold flows into small openings (up to .004 inches).

- High strength
- Fast acting
- Durable bonding
- Withstands temperatures up to 300°F (149°C)

2503-DP 3 grams in plastic bottle



Heat Sink / Transistor Grease

Heat sink draws heat away when applied to a component. In electronics, heat sink compound is generally used to thermally bond a component with a mechanical heat sink. For electrical applications, it is used with thermocouple wells, thermistors, and calrods, or wherever efficient cooling is required.

Silicone Heat Sink Compound

Ideal for electrical applications.

- Thermal conductivity – 0.70 W/m-K
- Functional temperature Range -67°F to 401°F (-55°C to 205°C)
- Easy application
- Will not harden and crack

1977-DP 4 oz. (118ml) squeeze tube



Silicone-Free Heat Sink Compound

Ideal for electronic applications where silicone contamination can hurt solderability and increase solder defects.

- Thermal conductivity – 0.92 W/m-K
- Functional temperature range -40°F to 392°F (-40°C to 200°C)
- Avoid solder defects due to silicon contamination
- Easy application
- Will not separate
- Will not harden and crack

1978-DP 4 oz. (118ml) squeeze tube

1978-1 1 lb. (454g) jar



1978-DP

Wipes

Techspray offers a large array of wipes for a variety of applications, including cleanroom, PCB rework, polishing, and maintenance. A large number of different materials are available to meet each unique requirement.

- **Cleanroom Wipers:** Meet the particulate count and extractables for Class 10 / ISO Class 4 and Class 100 / ISO Class 5 cleanrooms. CLASS 10 CLASS 100
- **Maintenance Wipers:** Lower cost, high quality wipers for heavy-duty cleaning.
- **Delicate Task Wipers:** Cellulose tissue for light cleaning, like in lab settings.
- **Microfiber Wipers:** Polishing wipes that are ideal for screen and display cleaning, with or without a cleaner.
- **SMT Roll Wipers:** DEK and MPM understencil roll wipes to fit the most common printers.



TECHCLEAN® WIPES SELECTION GUIDE

Key: ● = Best ◐ = Acceptable ○ = Not applicable / Not recommended

| | Properties | | | | | Application | | | | | | | |
|---------------------------------|-------------|------------------|--------------|------------|----------|-------------|---------------|--------------|------------------|-----|--------|------------|--------|
| | Cleanroom | Material | Construction | Absorbency | Strength | Electronics | ESD-Sensitive | LCD Cleaning | Stencil Cleaning | Lab | Optics | Industrial | Office |
| 2340 Cotton Wiper | | Cotton | Non-woven | ● | ◐ | ● | ○ | ○ | ● | ● | ○ | ● | ● |
| 2342/2343 Task Wipers | n/a | Poly / Cellulose | Non-woven | ○ | ○ | ● | ◐ | ○ | ○ | ● | ● | ○ | ◐ |
| 2350 Wiper | 100 / ISO 5 | Poly / Cellulose | Non-woven | ● | ◐ | ● | ◐ | ○ | ● | ● | ○ | ● | ● |
| 2351/2352 Absorbwipe | 100 / ISO 5 | Polyester | Non-woven | ○ | ◐ | ● | ○ | ○ | ○ | ◐ | ● | ○ | ○ |
| 2355 Purewipe | 100 / ISO 5 | Polyester | Knit | ◐ | ● | ● | ○ | ◐ | ● | ● | ○ | ◐ | ◐ |
| 2357 Twill Wipe | n/a | Cotton | Woven | ● | ● | ○ | ○ | ○ | ○ | ◐ | ○ | ● | ◐ |
| 2358 SMT Wipe | 100 / ISO 5 | Poly-urethane | Foam | ● | ○ | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ |
| 2359/2364/2365 Maintenance Wipe | n/a | Poly / Cellulose | Non-woven | ● | ◐ | ◐ | ◐ | ○ | ● | ○ | ○ | ● | ● |
| 2362 Antistatic Wipe | 10 / ISO 4 | Polyester | Knit | ◐ | ● | ● | ● | ◐ | ○ | ● | ○ | ○ | ○ |
| 2363 Microfiber Wipe | n/a | Poly / Nylon | Knit | ◐ | ● | ◐ | ○ | ● | ○ | ○ | ● | ○ | ● |
| 2366/2367 Roll Wipes | n/a | Poly / Cellulose | Non-woven | ● | ◐ | ○ | ○ | ○ | ● | ○ | ○ | ○ | ○ |
| 2368 LCD Wipe | n/a | Nylon | Knit | ◐ | ● | ○ | ○ | ● | ○ | ○ | ○ | ◐ | ● |

Note: To qualify for your cleanroom requirements, please refer to www.techspray.com for full data sheets.

TechClean Wiper CLASS 100
General Purpose Wipe



Hydroentangled cellulose/polyester wipe with high absorbency and extra low particulate count and no chemical extractables.

- Class 100 cleanroom qualified
- High absorbency
- Very low particulate count

Specifications: Exceeds U.S. Air Force requirements for surface contamination, HP 9300-1618

2350-100 100 - 8"x10" (20cm x 25cm)
c-fold wipes,
double-bagged



Cotton Cleanroom Wiper

This hydroentangled cotton wipe has high absorbency with extra low particulate and chemical extractables. Ideal for stencil cleaning.

- Low chemical extractables
- Lint-free
- Biodegradable & sustainable
- High absorbency - 6 times its weight
- Made with USA grown cotton

2340-100 100 - 9" x 9",
(23cm x 23 cm),
flat wipes, double-bagged



Recycled Delicate Task Wipers

Ideal for light cleaning tasks in the laboratory, repair and maintenance facilities, and more. Quickly and easily wipes up liquid and dust. Packaged in a portable dispenser that reduces lint and cross contamination.

- Low linting
- Eco-friendly replacement for Kimwipes (KC34155, KC34256)
- 100% recycled wipe & box
- Biodegradable & sustainable

2342-300 280 count, 4.4" x 8.3" (11cm x 21cm),
pop-up box, 60 boxes/case

2343-140 140 count, 15" x 16.6"
(38cm x 42cm),
pop-up box,
140 boxes/case



TechClean Purwipe™ CLASS 100
Low-Linting Poly Wipe



100% polyester wipe is a strong, low-linting wipe that is ideal for SMT stencil cleaning and PCB rework. Tear resistant to allow cleaning around leads without fraying.

- Class 100 cleanroom qualified
- Very low particulate count
- Tear resistant

2355-100 100 - 9"x9" (23cm x 23cm)
flat wipes, double-bagged



TechClean Absorbwipe™ CLASS 100
For Sensitive Surfaces

Very soft and absorbent hydroentangled polyester wipe for cleaning optical equipment, fiber optics, and other sensitive surfaces.

- Non-abrasive
- Extremely soft
- Highly absorbent

2351-100 100 - 4"x4" (10cm x 10cm)
flat wipes, double-bagged

2352-100 100 - 9"x9" (23cm x 23cm)
flat wipes, double-bagged



TechClean Maintenance Wipes

Hydroentangled cellulose/polyester wipe with high absorbency. Economical, but very high quality wipes are ideal for production and maintenance applications.

- High absorbency
- Economical

2359-300 300 - 9"x9" (23cm x 23cm) flat wipes

Economy Grade

2364-50 50 - 12"x 12" (30.5cm x 30.5cm) dry wipes

2365-300 300 - 9" x 9" (23cm x 23cm) dry wipes



Anti-Static Wipe CLASS 10

Polyester wipe that is interwoven with DuPont's NEGA-STAT carbon yarn. NEGA-STAT dissipates static charge, preventing static build-up and allowing dissipation. Perfect for dry wiping ESD-sensitive components and boards. Tear resistant to allow cleaning around through-hole leads without fraying.

- Anti-static — will not generate charge
- Class 10 cleanroom laundered & qualified
- Tear resistant

2362-150 150 - 9"x9" (23cm x 23cm) flat wipes



TechClean Twill Wipe

Tear Resistant Cotton

100% cotton twill weave designed for wiping abrasive surfaces. Tear resistant to allow cleaning around leads without fraying. Low static generation, so good for static sensitive areas.

- Tightly woven 100% cotton
- Tear resistant
- Low static generation

2357-100 100 - 6"x6" (15cm x 15cm) flat wipes, double-bagged



TechClean SMT Wipe CLASS 100

Lint-Free Foam

Polyurethane foam wipe designed for cleaning surface mount stencils and screening equipment. Fiber-free foam does not generate lint, which can clog fine pitched stencils and cause misprints.

- Class 100 cleanroom qualified
- Fiber-free construction — no linting
- Will not snag on stencils
- Tear resistant

2358-50 50 - 9"x9" (23cm x 23cm) flat wipes, double-bagged



Also available:

See page 14 and 18 for other great SMT cleaners including water-based and IPA pre-saturated wipes.

Microfiber Glass & Plastic Cleaning Wipes

Cleans and polishes glass or plastic. Ideal for removing fingerprints and light oils without the use of solvent cleaners.

- Cleans & polishes glass or plastic
- Low-linting
- Washable (avoid fabric softener)

2363-50 50 - 8" x 8" (20cm x 20cm) dry wipes w/hemmed edges, double-bagged

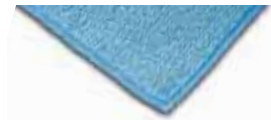


LCD & Plasma Screen Cleaning Wipes

Soft and low-linting microfiber terry cloth is ideal for cleaning and polishing LCD and plasma screens, plexi-glass, chrome, and other sensitive surfaces. Buffs surface to a shine with or without cleaner. Use with 1605-6FP cleaner (see pg. 6).

- Cleans & polishes sensitive surfaces
- Effective wet or dry
- Washable (avoid fabric softener)
- Low-linting

2368-2 2 - 16"x 16" (40.6cm x 40.6cm) dry wipes w/hemmed edges



Microfiber (2368-2) is perfect for chrome polishing

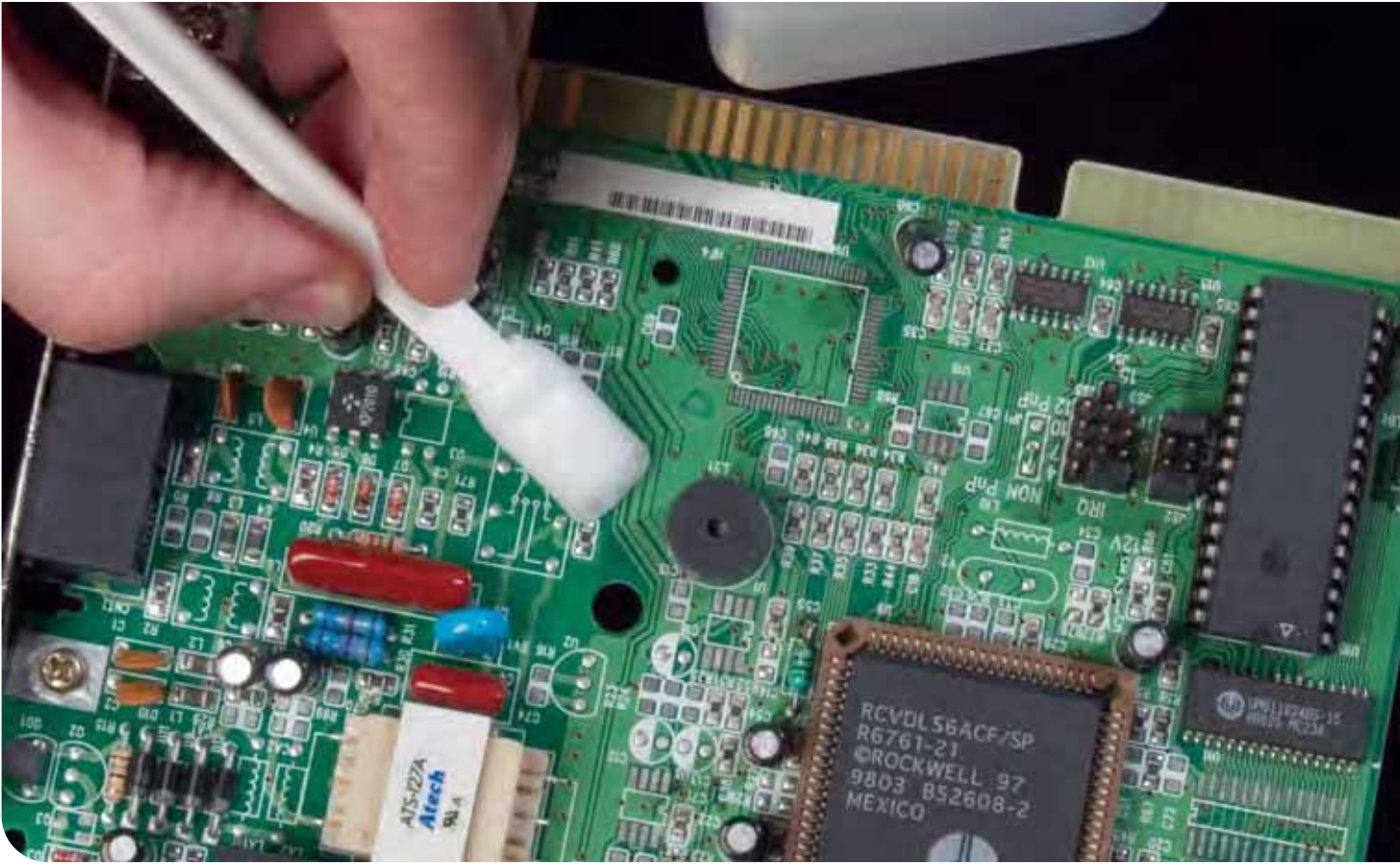
Roll Wipes for DEK and MPM SMT Printers

Made from low lint fabric and designed for vacuum operation.

- Maximum absorbency
- Strong both wet & dry
- Textured non-woven poly-cellulose fabric
- Low linting – prevents misprints
- Density 68 GSM



| Part # | OEM Brand | Equip model | Core ID | Notch | Paper Width | Core Width | Matl Length |
|----------|-----------|--------------------------------|--------------|-------|---------------|---------------|--------------|
| 2366-DEK | DEK | DEK 265, #129051/GS, GSX & 288 | 0.75" (19mm) | 1 | 20.3" (515mm) | 20.9" (530mm) | 39' (11.9 M) |
| 2367-MPM | MPM | MPM #1485/AP & UP2000 | 0.75" (19mm) | 0 | 17.5" (444mm) | 18" (457mm) | 39' (11.9 M) |



TechSwabs

precisely designed, manufactured and packaged to serve a wide variety of cleaning and maintenance needs. TechSwabs are manufactured in accordance with Techspray's rigid specifications, using specialized materials to ensure low particle generation.

Microfiber swabs are the most economical choice for high volume usage. Foam swabs are ideal for more precision cleaning where linting needs to be avoided.

Cotton TechSwabs

Tightly wrapped, pre-cleaned cotton ensures the least amount of extractable contaminants.

All swabs shown actual size – 1:1 scale

| Product | Tip Width | Attachment of Tip | Handle Length | Handle Material | 30 Pack Bag | 100 Pack Bag | 1000 Pack Bag |
|---------|-------------|-------------------|---------------|-----------------|-------------|--------------|---------------|
| 2300 | 7/8" / 22mm | wrapped | 6" / 15cm | wood | — | XXXXXX | XXXXXX |
| | | | | | | | |
| 2301 | 7/8" / 22mm | wrapped | 6" / 15cm | wood | — | XXXXXX | XXXXXX |
| | | | | | | | |
| 2313 | 1" / 25mm | wrapped | 1" / 2.5cm | paper | XXXXXX | — | — |
| | | | | | | | |

Foam TechSwabs CLASS 100

All swabs shown actual size – 1:1 scale

All foam swabs are manufactured with 100 pores per inch reticulated polyurethane foam, which ensures excellent absorbency while minimizing contamination. Tips are affixed by heat seal to prevent tip loss, even while saturated with solvent. Flexible tips provide versatility and softer touch, while rigid heads allow for more aggressive cleaning.

| Product | Tip Width | Attachment of Tip | Handle Length | Handle Material | 50 Pack Bag | 1000 Pack Bag |
|--|-------------------|-------------------|-------------------|-----------------|-------------|---------------|
| 2302 <i>Cotton Bud Wrapped in Foam, Rigid Head</i> | 0.44" (11.2mm) | Heat Sealed | 6" (15cm) | Polypropylene | 2302-50 | 2302-1000 |
| 2303 <i>Rigid Head</i> | 0.19" (4.8mm) | Heat Sealed | 6" (15cm) | Polypropylene | 2303-50 | 2303-1000 |
| 2306 <i>Rigid Head</i> | 0.5" (13mm) | Heat Sealed | 5" (13cm) | Polypropylene | 2306-50 | 2306-1000 |
| 2307 <i>Flexible Tip</i> | 0.19" (4.8mm) | Heat Sealed | 4" (10cm) | Polypropylene | 2307-50 | 2307-1000 |
| 2309 <i>Flexible Tip</i> | 0.125" (3.2mm) | Heat Sealed | 3" (7.6cm) | Polypropylene | 2309-50 | 2309-1000 |
| 2311 <i>Flexible Tip</i> | 0.125" (3.2mm) | Heat Sealed | 2.625" (6.7cm) | Polypropylene | — | 2311-1000 |

Fiber Optic TechSwabs CLASS 100

All swabs shown actual size – 1:1 scale

Foam fiber optic swabs are ideal for removing transmission disrupting contaminants in bulkhead connectors. The head conforms to the various connector shapes, cleaning the conductor bulkhead corners inside the bulkhead pocket. Foam fiber optic swabs are an economic choice over wrapped swabs. Tips are heat bonded, so no contaminating glues have been used.

All swabs shown actual size – 1:1 scale

| Product | Tip Width | Attachment of Tip | Handle Length | Handle Material | 50 Pack Bag | 1000 Pack Bag |
|------------------------------------|-------------------|-------------------|-----------------|-----------------|-------------|---------------|
| 2316 <i>Flexible Tip</i> | 0.05" (1.25mm) | Heat Sealed | 6.25" (16cm) | Polypropylene | 2316-50 | 2316-1000 |
| 2317 <i>Flexible Tip</i> | 0.05" (1.25mm) | Heat Sealed | 6.25" (16cm) | Polypropylene | 2317-50 | 2317-1000 |

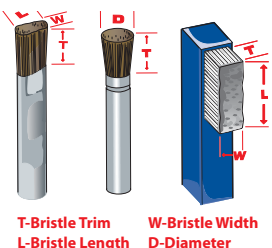
Brushes

Techspray's TechClean® brushes are made of premium grade materials. Don't be fooled by cheap imports. Bristles are securely stapled in place, eliminating loose bristles.

Choose the Right Bristle Material for Your Needs:

Natural — Soft, resilient and long lasting. Hog bristles are stiffer than horsehair.

Metal — For burnishing, polishing, non-sparking static dissipation and deburring. Brass is a softer bristle than stainless steel.



Selecting the right brush:
Brushes dimensions are specified as bristle length (L), width (W), and trim (T).



General Cleaning Brushes







A wide variety of sizes and bristle material for general maintenance cleaning. All handles are made of strong, static neutral wood.

| FRONT VIEW | SIDE VIEW | Product | L Bristle Length | W Bristle Width | T Bristle Trim | Bristle Material | Handle Material | Handle Length |
|--|-----------|---------------|------------------|------------------|-----------------|------------------|-----------------|--------------------|
| <i>All brushes shown actual size – 1:1 scale</i> | | | | | | | | |
| | | 2020-1 | 1.375" (35mm) | 0.25" (6.4mm) | 0.44" (11mm) | Horse Hair | Wood | 7.75" (19.7cm) |
| | | 2021-1 | 1.375" (35mm) | 0.25" (6.4mm) | 0.44" (11mm) | Hog Bristle | Wood | 7.75" (19.7cm) |
| | | 2022 | 2.125" (54mm) | 0.875" (22mm) | 0.75" (19mm) | Hog Bristle | Wood | 8.375" (21.3cm) |

| FRONT VIEW | SIDE VIEW | Product | L Bristle Length | W Bristle Width | T Bristle Trim | Bristle Material | Handle Material | Handle Length |
|---|--|---------------|------------------|-------------------|------------------|-------------------------|-----------------|-------------------|
| <i>All brushes shown actual size – 1:1 scale</i> | | | | | | | | |
|  |  | 2025-1 | 1.375" (35mm) | 0.25" (6.4mm) | 0.44" (11mm) | Brass .003" (0.08mm) | Wood | 7.75" (19.7cm) |
|  |  | 2027-1 | 0.875" (22mm) | 0.375" (9.5mm) | 0.5" (12.7mm) | Hog Bristle | Wood | 4.94" (12.5cm) |







Static Sensitive Brushes

Ideal for cleaning static sensitive electronics or components. Anodized aluminum falls within the static dissipative range. Steel bristles are conductive, and horse hair is conductive when saturated with solvent.

| FRONT VIEW | SIDE VIEW | Product | L Bristle Length | W Bristle Width | T Bristle Trim | Bristle Material | Handle Material | Handle Length |
|---|--|---------------|-------------------|-------------------|-------------------|-----------------------------------|-------------------|-------------------|
| <i>All brushes shown actual size – 1:1 scale</i> | | | | | | | | |
|  |  | 2040-1 | 1.19" (30.2mm) | 0.125" (3.2mm) | 0.44" (11.2mm) | Horse Hair | Anodized Aluminum | 6.44" (16.4cm) |
|  |  | 2042-1 | 1.19" (30.2mm) | 0.375" (9.5mm) | 0.44" (11.2mm) | Horse Hair | Anodized Aluminum | 6.44" (16.4cm) |
|  |  | 2043-1 | 1.19" (30.2mm) | 0.375" (9.5mm) | 0.44" (11.2mm) | Stainless Steel .003" (0.08mm) | Anodized Aluminum | 6.44" (16.4cm) |

Technical Brushes

Small, precision brushes for technical cleaning and coating or adhesive application. Double-sided brushes include tapered end for tight areas.

| FRONT VIEW | SIDE VIEW | Product | L Bristle Length | W Bristle Width | T Bristle Trim | Bristle Material | Handle Material | Handle Length |
|---|--|---------------|-------------------|--------------------|--|------------------|-------------------|------------------|
| <i>All brushes shown actual size – 1:1 scale</i> | | | | | | | | |
|  |  | 2030-1 | 0.125" (3.2mm) | 0.0625" (1.6mm) | 0.125" (3.2mm) | Goat Hair | Stainless Steel | 3.5" (8.9cm) |
|  |  | 2031-1 | 0.25" (6.4mm) | 0.19" (4.8mm) | A - 0.5" (13mm) B - 0.25" (6.4mm) | Horse Hair | Stainless Steel | 4.5" (11.4cm) |
|  |  | 2032-1 | 0.5" (13mm) | 0.375" (9.5mm) | A - 0.25" (6.4mm) B - 0.19" (4.8mm) | Horse Hair | Zinc Plated Steel | 4.5" (11.4cm) |
|  |  | 2033-1 | 0.44" (11.2mm) | 0.375" (9.5mm) | 0.75" (19mm) | Horse Hair | Zinc Plated Steel | 4.5" (11.4cm) |

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TECHLAB

Techspray's Cleaning & Coating Application Lab

Techspray combines over 30-years' experience developing high precision cleaners and conformal coatings, giving us a unique perspective of these interrelated processes.

Techspray's TechLab 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.



Techspray has access to ultra-sensitive analytical equipment to not only detect contamination, but to speciate the residues to determine whether or not they may lead to current leakage, electrochemical migration, and even board failure. Testing & analytical capabilities include:

- Ion chromatography (IC) for ionic cleanliness
- SIR testing for materials and finished assemblies
- Electromigration test
- R.O.S.E. testing for general ionic measurements
- High magnification digital photo documentation



Localized extraction system seals over specific components.

Ultra-Sensitive Extraction Method

TechLab uses a localized extraction method, which seals over troublesome areas of the board and injects high temperature steam, and then collects the affluent for analysis. This method is the most sensitive extraction process available, allowing identification of ionic contamination that other methods commonly miss.



View SDS and data sheets at www.techspray.com



Techspray... in good company within ITW

Techspray is a part of Illinois Tool Works (ITW) with sister companies like a world-class soldering and flux supplier, and leading manufacturers of PCB assembly equipment. Synergies with ITW companies allow Techspray to effectively identify and solve cleaning and coating process issues.

Techspray also has access to the ITW Tech Center, a centralized group of engineers and scientists armed with the latest testing and analytical technologies.

Free TechLab Qualification Testing

Contact Techspray for free TechLab qualification testing. We are available to help qualify new cleaning processes, evaluate current processes, or troubleshoot contamination issues. We can test actual production samples or use our specially designed cleanliness testing board.

Let's work together to optimize your cleaning process.

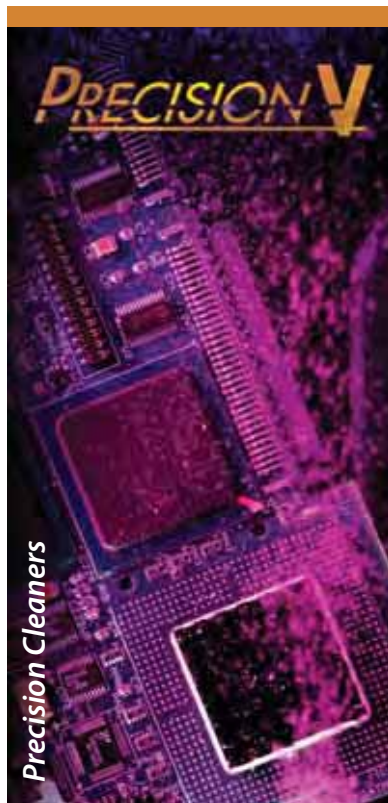
New Innovations from



TECHSPRAY®



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For the most complete & up-to-date information, go to www.techspray.com



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