



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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2017

PRODUCT CATALOG &
APPLICATION GUIDE



TECHSPRAY®



Maintenance & Repair



Precision Cleaning



PCB Assembly



Rework & Repair



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. They are completely portable, ultra-pure, and free of moisture, oil, and other contaminants.

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

Nonflammable Duster

Nonflammable, 100% HFC-134a duster

1671-10S 10 oz. (283g) aerosol

1671-15S 15 oz. (425g) aerosol

CAN1671-10S 10 oz. (283g) aerosol

Canada compliant packaging

CAN1671-15S 15 oz. (425g) aerosol

Canada compliant packaging



1671-10S 1671-15S

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



Vortex™ High Velocity Duster

High velocity, 100% HFC-134a duster

- Most powerful blast
- Nonflammable
- Safest choice for energized equipment
- Vortex 360° sprays upside-down
- Velocity – 14.6 m/s

1697-8S Vortex 360° 8 oz. (227g) aerosol

1697-10S 10 oz. (283g) aerosol



1697-8S 1697-10S

Economy Duster

Economical HFC-152a duster

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

1673-10S 10 oz. (283g) aerosol

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



1673-10S



Renew-Duster

1580-10S 10 oz. (283g) aerosol



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

DUSTER SELECTION GUIDE

	Spray Power	Nonflammable	360° Spray	Contents	GWP*	Use On Live Circuits
1697-10S Vortex Duster	Best	Yes	No	HFC-134a	1300	Yes
1697-8S Vortex 360° Duster	Best	Yes	Yes	HFC-134a	1300	Yes
1671 Duster	Good	Yes	No	HFC-134a	1300	Yes
1673 Economy Duster	Good	No	No	HFC-152a	140	No
1580 Renew-Duster	Good	Yes	No	HFO-1234ze	6	Yes

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

Isopropyl Alcohol (IPA)

Techspray has the broadest line of isopropyl alcohol (IPA) in the industry, ranging from aerosol, pre-saturated wipes, and bulk packaging. Two grades of IPA are available: 99.8% anhydrous (containing as little water as possible) for fast-drying cleaning and 70% IPA / 30% DI for stencil and other cleaning when slower evaporation is desired.



70% Bulk – Cleaning Grade IPA

1608-G4 1 gal. (3.8L) container

99.8% Bulk – Technical Grade IPA

1610-P 1 pt. (473mL) bottle

1610-PT 1 pt. (473mL) bottle w/ trigger sprayer

1610-G1 1 gal. (3.8L) bottle

1610-G4 1 gal. (3.8L) bottle sold only 4/cs

1610-5G 5 gal. (19L) container

1610-54G 54 gal. (205L) drum

Specs: 99.8% IPA qualified as ACS reagent grade, fed spec TT-1-735A (amend 3, notice 2) grades A&B, ASTM D770-05



1608-G4

1610-5G

1610-PT

1610-P

Pop-up Tubs

- 5"x8" (127mm x 203mm) wipes
- 100 wipes/tub
- Lint-free, tear resistant polyester

70% IPA Wipes

1608-100DSP 100 wipes in Disposable Tub

1608-100FL 100 wipes in Flip-Top Tub

1608-100R 100 wipes refill roll

99.8% IPA Wipes

1610-100DSP 100 wipes in Disposable Tub

1610-100FL 100 wipes in Flip-Top Tub

1610-100R 100 wipes refill roll



1608-100DSP

1610-100DSP

1608-100FL

1610-100FL

Refill Roll

Individually Wrapped Wipes

- 99.8% pure IPA
- 5.5"x5.5" (140mm x 140mm) wipes
- 50 wipes/box
- Lint-free, tear resistant poly-cellulose

1610-50PK



E-Line IPA Electronics Cleaner

99.8% IPA in convenient aerosol package

- 99.8% pure IPA
- Compliant with SCAQMD rule 1171
- Plastic safe
- Low toxicity
- Non-ozone depleting

1610-12S 12 oz. (340g) aerosol

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



Precision, Safety, Performance . . . Advanced Chemistries to Improve Your Products & Processes.

Techspray® offers cutting-edge technologies to improve your processes. Several formulas are available for applications ranging from electronics cleaning to heavy-duty industrial cleaning.



POWERFUL, NONFLAMMABLE & COST EFFECTIVE CLEANER

- Ideal replacement for n-propyl bromide (nPB) and other toxic industrial solvents
- Available in aerosol or bulk for vapor degreasing, ultrasonic and soak applications
- PWR-4™ Maintenance Cleaner for heavy-duty degreasing and contact cleaning, PWR-4™ Flux Remover for PCB cleaning



NONFLAMMABLE & POWERFUL CLEANER

- Top-selling solvent that's effective on the broadest array of soils
- Available in aerosol or bulk for ultrasonic and soak applications



NONFLAMMABLE, POWERFUL & HIGH PRECISION CLEANER

- Replacement for AK225, which was banned because of environmental issues
- Ideal for aviation, aerospace, medical and military applications
- Available in aerosol or bulk for vapor degreasing, ultrasonic and soak applications



ECONOMICAL & POWERFUL CLEANER, BUT FLAMMABLE

- Effective cleaner, yet safe on sensitive plastics
- Available in aerosol or bulk for ultrasonic and soak applications



HIGH PERFORMANCE ECO-FRIENDLY CLEANERS

- Water-based flux removers with zero GWP and low VOC
- Engineered for batch and inline equipment



SAFER REPLACEMENTS FOR TOXIC INDUSTRIAL SOLVENTS

n-Propyl Bromide (nPB), Trichloroethylene (TCE), and Perchloroethylene (Perc) are three examples of harmful chemicals that are commonly used in aerosol cleaners in industrial applications. These chemicals are commonly used as cleaning solvents because they are nonflammable, have high solvency, and are relatively inexpensive.

Because of safety concerns, these solvents are under close scrutiny by OSHA, EPA, and local agencies. For example, The American Conference of Governmental Industrial Hygienists (ACGIH) recommends a 10 ppm time-weighted average threshold limit of nPB, but has proposed a lower 0.1 ppm (ACGIH 2013). That's because nPB is a suspected human carcinogen, and has shown to negatively impact neurological and reproductive functioning.

Techspray offers effective replacements for these toxic solvents. PWR-4® High Performance Solvents provides all the cleaning power of nPB and other industrial solvents, but without the health risks.

For more information, read "Toxic Chemicals Used for Industrial Cleaning" white paper at www.techspray.com





Degreasers / Contact Cleaners



Maintenance Cleaner

Blasts away oil and contaminants off of contacts, printed circuit boards, barcode instruments, switch boxes, gear boxes, and electronic motor controllers. Grease and oil flow right off, reducing the time and materials needed to scrub off stubborn soils.

- Nonflammable
- Much safer than most common industrial solvents — TCE, nPB, Perc & Methylene Chloride
- Powerful cleaner — Ideal for degreasing and contact cleaning
- Available in aerosol or bulk for vapor degreasing, ultrasonic and immersion cleaning
- Rapid evaporation
- Non-ozone depleting
- Cleaning applications: electronics, relays, switches & breakers, transformers, and electric motors and generators

- 3400-20S** 20 oz. (567g) aerosol
- 3400-G** 1 gal. (3.8L) pail
- 3400-5G** 5 gal. (18.9L) pail
- 3400-54G** 54 gal. (204L) drum



3400-5G

3400-20S



MAINTENANCE CLEANER SELECTION GUIDE

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

	3400 PWR-4 Maintenance Cleaner	1630 G3 Maintenance Cleaner	1632 G3 Contact Cleaner	1635 G3 Industrial Cleaner	1638 G3 Universal Solvent	1651 Precision-V	1652 Precision-V Plastic Safe	2851-20S PWR4 Aviation Degreaser	1647-16S Aviation Degreaser II	1610 E-LINE IPA	1620 E-LINE Maintenance Cleaner	1622 E-LINE Contact Cleaner	1621 E-LINE Bulk Solvent
PROPERTIES													
Nonflammable	●	●	●	●	●	●	●	●	●	●	●	●	●
Evaporation rate (1=slow, 5=fast)	5	5	5	4	5	5	5	5	5	3	4	4	4
VOC% (EPA) - Aerosol	75	64	64	69	-	37	13	65	12.6	75	75	75	-
VOC% (EPA) - Bulk	-	-	-	-	61	49	18	-	-	100	-	-	100
VOC% (CARB) - Aerosol	75	75	75	69	-	75	75	-	-	75	75	75	-
VOC% (CARB) - Bulk	-	-	-	-	100	100	100	-	-	100	-	-	100
APPLICATIONS													
Benchtop cleaning	●	●	●	●	●	●	●	●	●	●	●	●	●
Ultrasonic	●				●	●	●			*			*
Vapor degreasing	●												

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

* Non-heated ultrasonic only



Blue Shower Maintenance Cleaner

Nonflammable, powerful cleaner

Clean oil and contaminants off of metal parts, printed circuit boards, barcode instruments, switch boxes, gear relays, and electronic motor controllers.

1630-16S 16 oz. (454g) aerosol



- Nonflammable
- Powerful cleaner
- Rapid evaporation
- Non-ozone depleting
- Dielectric strength – 27.3 kv

Compliant with Boeing D6 17487, Rev T



Industrial Maintenance Cleaner

High power, fast evaporating maintenance cleaner

Blast away heavy oils and greases off of metal parts, gear boxes, and engines.

1635-20S 20 oz. (567g) aerosol



- All-in-one electronic maintenance & contact cleaner
- Rapid evaporation
- Non-ozone depleting
- Low toxicity compared to TCE, nPB & Perc
- Dielectric strength – 30.5 kv



Universal Cleaner

Nonflammable, powerful liquid cleaner

Engineered to remove oils, fluxes and other contamination using a manual soak cleaning process or ultrasonic equipment.

1638-G 1 gal. (3.8L) pail

1638-5G 5 gal (19L) pail

1638-54G 54 gal. (205L) drum



- Nonflammable
- Powerful cleaner
- Effective as maintenance cleaner and flux remover
- Rapid evaporation
- Non-ozone depleting
- Dielectric strength – 27.3 kv



Contact Cleaner

Nonflammable, powerful contact cleaner

Clean oxidation, oil, and other contaminants from contacts, metal switches, relays, edge connectors, buss bars, and circuit breakers.

1632-16S 16 oz. (454g) aerosol



- Nonflammable
- Powerful cleaner
- Rapid evaporation
- Non-ozone depleting
- Dielectric strength – 36.2 kv

Compliant with Boeing D6 17487, Rev T



Flux Remover & Maintenance Cleaner

Nonflammable and powerful precision cleaner

Clean off flux residues, oil, and other contamination from electronics and other sensitive surfaces.

1651-16S 16 oz. (454g) aerosol

1651-G 1 gal. (3.8L) pail

1651-5G 5 gal. (19L) pail

1651-54G 54 gal. (205L) drum



- Nonflammable
- Low VOC
- Safe on most plastics
- High precision – residue-free
- Rapid evaporation
- Non-ozone depleting



Plastic-Safe Universal Cleaner

Plastic-safe, nonflammable cleaner for sensitive electronics

Engineered for use on sensitive plastic electronic components, packaging and casements.

- 1652-10S** 10 oz. (284g) aerosol
- 1652-G** 1 gal. (3.8L) pail

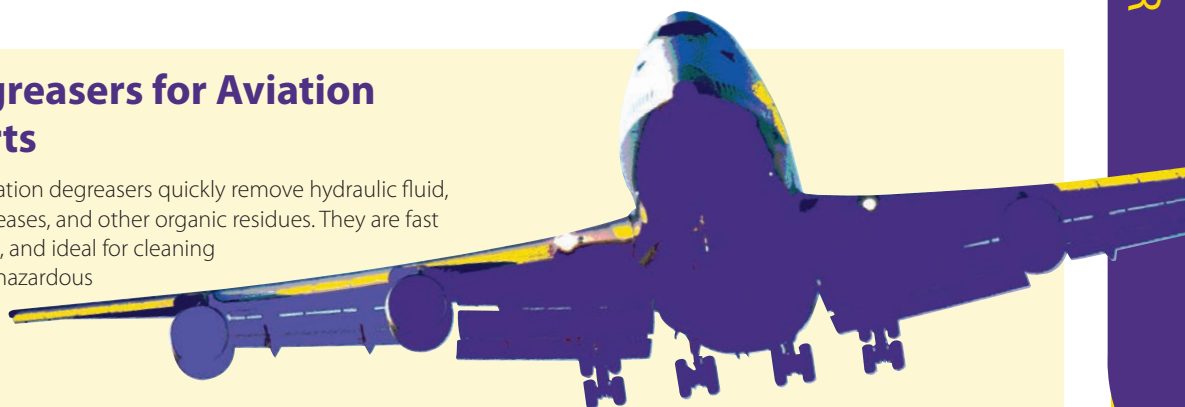
Specifications: NESHAP 63.741-753



- Nonflammable
- Low VOC
- Safe on sensitive plastics
- High precision – residue-free
- Rapid evaporation
- Non-ozone depleting
- Dielectric strength – 23 kv

Specialized Degreasers for Aviation and Aircraft Parts

These specially engineered aviation degreasers quickly remove hydraulic fluid, fuel oils, lubricating oils and greases, and other organic residues. They are fast evaporating, quick penetrating, and ideal for cleaning aviation parts. Both are free of hazardous air pollutants (HAPs), and CARB compliant.



Aviation Degreaser

Exceptional nonflammable cleaner for aircraft parts degreasing

- 2851-20S** 20 oz (567g) aerosol

Specifications: Meets Airbus UK ABR9-0140 General Purpose Cleaning Solvent, FedEx CPN 0311737, Boeing D6 17487, Rev T



- Nonflammable
- Fast evaporation
- Zero residue
- Non-ozone depleting
- Does not contain n-propyl bromide
- Dielectric breakdown of 13.7 kv
- CARB compliant

Aviation Degreaser II

NESHAP compliant cleaner for removing hydraulic and lubricating fluids

- 1647-16S** 16 oz. (454g) aerosol

Specifications: Meets Boeing D6 17487, Rev T, NESHAP 63.741-753



- Nonflammable
- Low VOC / NESHAP compliant
- Fast evaporation
- Zero residue
- Non-ozone depleting
- Does not contain n-propyl bromide
- Dielectric breakdown of 11.9 kv
- CARB compliant

More Choices for Aviation Cleaning:

- Compliant with Boeing D6 17487, Rev T:
- G3 Blue Shower Maintenance Cleaner (1630-16S)**
- G3 Blue Shower Contact Cleaner (1632-16S)**



Blue Shower Maintenance Cleaner

Powerful and economical aerosol cleaner

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

1620-10S 10 oz. (284g) aerosol



- Powerful cleaner
- Ideal for sensitive plastics
- Low toxicity
- Non-ozone depleting



Flux Remover & Maintenance Cleaner

Powerful and economical liquid cleaner

Engineered to remove oils, fluxes and other contamination using soak cleaning process or ultrasonic equipment.

1621-G 1 gal. (3.8L) pail
1621-5G 5 gal. (18.9L) pail
1621-54G 54 gal. (204L) drum



- Effective as maintenance cleaner and flux remover
- Ideal for sensitive plastics
- For cold cleaning and ultrasonic (unheated only)
- Non-ozone depleting



Contact Cleaner

Powerful and economical electronic contact cleaner

Clean oxidation, oil, and other contaminants from contacts, metal switches, relays, edge connectors, buss bars, and circuit breakers.

1622-10S 10 oz. (284g) aerosol
1622-13S 13 oz. (369g) aerosol



- Powerful cleaner
- Ideal for sensitive plastics
- Low toxicity
- Non-ozone depleting



IPA Electronics Cleaner

99.8% IPA in convenient aerosol package

Ideal for defluxing, stencil cleaning and fiber optic connector cleaning.

1610-12S 12 oz. (340g) aerosol

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



- 99.8% pure IPA
- Compliant with SCAQMD rule 1171
- Plastic safe
- Low toxicity
- Non-ozone depleting



Zero-VOC General Purpose Cleaner

General purpose remover of adhesives and coatings

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

1611-P 1 pt. (473mL) can



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

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



Eco-Shine™ Glass & Surface Cleaner

Eco-friendly, nonflammable, streak-free glass cleaner

Cleans glass, stainless steel, chrome, mirrors, tile, plastic, ceramic and enamel and leaves a streak-free finish.

- 1505-QT** 1 qt. (0.95L) w/ trigger sprayer
- 1505-G** 1 gal. (3.8L) jug



1505-QT

- Streak-free
- Nonflammable
- Non-ammoniated – safe on sensitive surfaces
- Low VOC, no GWP
- Non-ozone depleting

Glass Cleaner

Foaming aerosol glass and surface cleaner

- 1625-18S** 18 oz. (510g) aerosol



- Foaming action
- Streak-free
- Safe on glass & plastics
- Nonflammable

Specifications: GM H1018, Ford Tox #142432

Roller Rejuvenator & Platen Cleaner

Rubber roller cleaner and rejuvenator

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

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



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

Specifications: Ford Tox #142415

Note: Not available in California

Label & Adhesive Remover

Fast acting, citrus-based label and 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.

- 1613-6S** 4.5 oz. (128g) aerosol



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

Note: Not available in California

Adhesives

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.

Heavy-Duty Adhesive

- 3500-11S** 12 oz. (340g) aerosol

Economy Adhesive

- 3505-11S** 12 oz. (340g) aerosol

Contact Adhesive

- 3510-12S** 12 oz. (340g) aerosol



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



Flux Removers

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. PWR-4™, 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 eco-friendly 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



FLUX REMOVER SELECTION GUIDE

	3401 PWR-4 Flux Remover	1631 G3 Flux Remover	1634 G3 No-Clean Flux Remover	1638 G3 Bulk Solvent	1651 Precision-V	1649 Precision-V No-Clean Flux Remover	1652 Precision-V Plastic-Safe	1610 E-LINE IPA	1621 E-LINE Flux Remover	1530 Eco-dFluxer SMT100	1520 Eco-dFluxer SMT200	1530 Eco-dFluxer SMT300
PROPERTIES												
Nonflammable	●	●	●	●	●	●	●			●	●	●
Evaporation rate (1=slow, 5=fast)	5	5	5	5	5	5	5	3	4	1	1	1
VOC% (EPA) - Aerosol	73	64	64	-	37	64	13	75	75	-	-	-
VOC% (EPA) - Bulk	95	-	-	61	49	-	18	100	-	45	22	52
VOC% (CARB) - Aerosol	70	75	75	-	75	75	75	75	75	-	-	-
VOC% (CARB) - Bulk	100	-	-	100	100	-	100	100	-	45	52	22
APPLICATIONS												
Benchtop cleaning	●	●	●	●	●	●	●	●	●			
Ultrasonic	●			●	●		*	*	●	+	+	+
Vapor degreasing	●			●								
Inline defluxing system										●	●	●
Batch defluxing system										●	●	●

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

* Non-heated ultrasonic only + Rinse required

Solvent Defluxers



Flux Remover

Powerful, nonflammable and cost effective cleaner

Cleans away flux residues and other contaminants in vapor cleaning and ultrasonic application. Easily removes residues from high temperature lead free soldering operations, no-clean fluxes and all handling soils.

3401-G	1 gal. (3.8L) pail
3401-5G	5 gal. (18.9L) pail
3401-54G	54 gal. (204L) drum



- Nonflammable
- Much safer than most common industrial solvents — TCE, nPB, Perc & Methylene Chloride
- Powerful cleaner - Effective on R, RMA & no-clean fluxes
- Available in bulk for vapor degreasing, ultrasonic and immersion cleaning
- Rapid evaporation
- Non-ozone depleting



Flux Remover

Strong and fast-acting flux remover

Remove flux residues and other contaminants left by manufacture, rework, or repair of printed circuit boards.

1631-5S	5 oz. (142g) aerosol w/brush attachment
1631-16S	16 oz. (454g) aerosol
1631-16SB	16 oz. (454g) aerosol w/brush attachment



- Nonflammable
- Powerful cleaner
- Proven effective for lead-free processes
- All-in-one cleaner and defluxer
- Rapid evaporation
- Non-ozone depleting



No-Clean Flux Remover

Strong and fast-acting no-clean flux remover

Remove no-clean flux and white residues left by manufacture, rework, or repair of printed circuit boards.

1634-12S	12 oz. (340g) aerosol
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- Nonflammable
- Ideal for no-clean fluxes
- Proven effective for lead-free processes
- Rapid evaporation
- Non-ozone depleting



Universal Cleaner

Nonflammable, powerful liquid cleaner

Engineered to remove oils, fluxes and other contamination from electronics using a manual soak cleaning process or ultrasonic equipment.

1638-G	1 gal. (3.8L) pail
1638-5G	5 gal. (19L) pail
1638-54G	54 gal. (205L) drum



- Nonflammable
- Powerful cleaner
- Effective as maintenance cleaner and flux remover
- Rapid evaporation
- Non-ozone depleting
- Dielectric strength – 27.3 kv



No-Clean Flux Remover

Nonflammable and powerful cleaner for the toughest flux residues

Engineered to cut flux residues from the most difficult-to-clean processes. Removes lead-free and no-clean residues, and white residues left by manufacturing, rework, or repair of circuit boards.

1649-12S 12 oz. (340g) aerosol



- Effective on R, RMA, no-clean and OA fluxes
- Nonflammable
- Non-ozone depleting
- Rapid evaporation with no residue
- Safe on most plastics



Flux Remover & Maintenance Cleaner

Nonflammable and powerful precision 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 soak cleaning and ultrasonics (not intended for vapor degreaser).

1651-16S 16 oz. (454g) aerosol

1651-G 1 gal. (3.8L) pail

1651-5G 5 gal. (19L) pail



1651-16S

- Nonflammable
- Low VOC
- High precision – residue-free
- Rapid evaporation
- Non-ozone depleting
- Safe on most plastics



Plastic-Safe Universal Cleaner

Plastic-safe, nonflammable cleaner for sensitive electronics

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.

1652-10S 10 oz. (283g) aerosol

1652-G 1 gal. (3.8L) pail



1652-10S

- Nonflammable
- Low VOC
- Safe on sensitive plastics
- High precision – residue-free
- Rapid evaporation
- Non-ozone depleting

Specifications: NESHAP 63.741-753



Flux Remover & Maintenance Cleaner

Powerful and economical flux remover

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

1621-10S 10 oz. (283g) aerosol

1621-10SB 10 oz. (283g) aerosol w/brush attachment

1621-G 1 gal. (3.8L) can

1621-5G 5 gal (19L) pail

1621-54G 54 gal (205L) drum



1621-G

1621-10S

1621-10SB

1621-5G

- Powerful cleaner
- Proven effective for lead-free processes
- Ideal for sensitive plastics

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

Envi-Ro-Tech™ Defluxer

Alcohol-based flux remover and maintenance cleaner

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

1679-PT 1 pt. (473mL) bottle w/trigger sprayer



- Convenient and easy-to-use trigger sprayer
- Safe on plastics
- Ideal for removing handling soils



Vapor Degreaser Solvents

Techspray offers a wide variety of vapor degreaser formulas engineered to meet challenging requirements like cleanliness specifications, difficult-to-clean soils, solvent-sensitive materials, and restrictive regulations.

All Techspray solvents have azeotropic properties that allow them to remain stable as they are cycled in a vapor degreaser. They are not reactive or corrosive to metals commonly found in the construction of vapor degreasers.

PWR-R™ solvents are designed to replace nPB, TCE and Perc, matching and surpassing cleaning performance without the safety concerns.

Precision-V™ vapor degreaser solvents are ideal replacements for AK-225 based cleaners, which were phased out due to the ozone depletion restrictions of the Montreal Protocol.

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



Part #	Product Name	Base Solvents	kB value	Boiling Point (°F/°C)	VOC (g/l)	GWP	Degreasing	Defluxing	Plastic-Safe
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		●	
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	●	●	●
3400	PWR4 Maintenance Cleaner	3M Novec 7100	100	118/48	1201	ND	●		
3401	PWR4 Flux Remover	3M Novec 7100	100	118/48	1201	ND		●	

ND=Not Defined



Water-Based Defluxers

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
- Nonflammable
- Low 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) bottle
- 1550-5G** 5 gal. (19L) container
- 1550-54G** 54 gal. (205L) 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) bottle
- 1520-5G** 5 gal. (19L) container
- 1520-54G** 54 gal. (205L) drum



1550-5G

1520-G

1530-G

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) bottle
- 1530-5G** 5 gal. (19L) container
- 1530-54G** 54 gal. (205L) 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
- Nonflammable

- 1555-P** 1 pt. (473mL) container



Stencil Cleaners

Eco-Stencil UM

Manual & Under Stencil Cleaner

- Quickly clean paste or uncured adhesive
- Safe for stencils, tools, misprinted boards
- Nonflammable
- 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-QT 1 qt. (0.95L) w/ trigger sprayer
1570-G 1 gal. (3.8L) bottle
1570-GX10 1 gal. (3.8L) concentrate makes 10 gallons (38L)



Eco-Stencil AQ

Water-Based Batch Stencil Cleaner

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



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

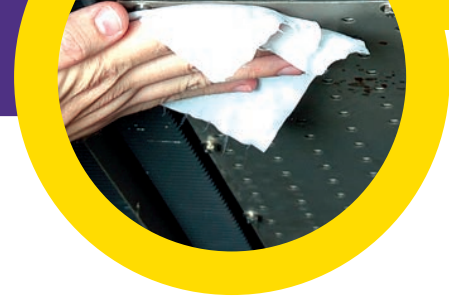
Eco-Stencil RF

Rinse-Free Batch Stencil Cleaner

- 1571-G** 1 gal. (3.8L) bottle
1571-5G 5 gal. (19L) container
1571-54G 54 gal. (205L) drum



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



Reflow Oven Maintenance

Eco-Oven

Reflow Oven, Wave Finger & Pallet Cleaner

- Quickly clean flux residue from oven & wave fingers
- Safe on warm ovens
- Nonflammable
- 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

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



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, JTU, SMT, Speedline and Vitronics-Soltec.

- Coating & flux residues peel off easily
- Cures during equipment heat-up cycle
- Low odor, non-hazardous, nonflammable
- 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** 16 fl. oz. (473ml) squeeze bottle
3601-G 1 gal. (3.8L) bottle



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%.



ESD Products

LICRON CRYSTAL

Permanent ESD Coating

- 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. (226g) aerosol (coats up to 200ft²)
1756-G 1 gal. (3.8L) jug



1756-8S



Zero Charge Anti-Stat Coating

Anti-static coating for fabrics & flexible surfaces

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

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



Zero Charge Mat & Tabletop Cleaner

Safe, effective cleaner for ESD mats

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

1733-QT 1 qt. (.95L) bottle with trigger sprayer
1733-G 1 gal. (3.8L) bottle



1733-QT

Zero Charge® ESD-Safe Floor Coating

ESD-safe floor coating

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

1720-G 1 gal. (3.8L) bottle (coats @1,200 ft²)
1720-5G 5 gal. (19L) pail (coats @6,000 ft²)



1720-G

Zero Charge Hand Lotion

Non-contaminating hand lotion for ESD sensitive environments

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

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



1702-8FP

Zero Charge Screen & Keyboard Cleaner

Cleans surfaces and leaves behind dissipative residue

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



1743-50PK



1743-QT

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



Conformal Coatings

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).

Application method considerations:

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.



FINE-L-KOTE™ SR

Silicone coating that's ideal for moisture and vibration protection

Standard Viscosity — 4-10 CPS

- 2102-12S** 12 oz. (355ml) aerosol
- 2102-P** 1 pt. (473ml) can
- 2102-G** 1 gal. (3.8L) can
- 2102-5G** 5 gal. (19L) pail

High Viscosity — 60-90 CPS

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



2102-12S

- 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-830B. UL94 V-0 rated.



FINE-L-KOTE™ HT

Silicone coating engineered for superior thermal and moisture resistance

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



2106-12S

- 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-830B. UL94 V-0 rated.

NEW!**FINE-L-KOTE™ LED**

Silicone conformal coating designed to coat over LEDs

Coat directly over LEDs without the time and expense of masking. Optical clarity prevents light from diffusing, scattering, or changing wavelength. Fine-L-Kote LED provides maximum protection from extreme temperatures on the flexible and rigid PCBs found in LED displays.

2120-P 1 pt. (473mL) can

2120-G 1 gal. (3.8L) can

2120-5G 5 gal. (19L) pail



- Fully transparent - will not block or change light intensity or wavelength
- Protects against adverse environments
- Flexibility prevents cracking
- Resists moisture, salt, fungus and corrosive vapors from severe environments
- Withstands high heat from PCB and operating environment

CONFORMAL COATING SELECTION GUIDE

	2120 Fine-L-Kote LED	2108 Turbo-Coat	2109 Turbo-Coat HV	2102 Fine-L-Kote SR	2102 HV Fine-L-Kote SR	2106 Fine-L-Kote HT	2104 Fine-L-Kote UR
Product Benefits	Optically Clear	Economical With Fastest Cure	Economical With Fastest Cure	Moisture & Vibration Resistant	Moisture & Vibration Resistant	High Operating Temperature	Durable & Chemically Resistant
Selective Spray System	●	○	●	○	●	●	●
Atomized Spray System	●	○	●	○	●	○	○
Dip	●	●	●	●	●	●	●
Aerosol Available	NO	YES	USE 2108-12S	YES	USE 2102-12S	YES	YES
Thermal Resistant	●	○	○	●	●	●	○
Moisture /Fungus Resistant	●	○	○	●	●	●	●
Chemical Resistant	●	○	○	●	●	●	●
Vibration Resistant	●	○	○	●	●	●	○
Ease of Rework	●	●	●	●	●	●	○
Tack Free Time (minutes)	60	3	9	60	60	45	15
Accelerated Cure Time/Temp	2 Step 30 Min.@ 32°C 45 Min.@ 93°C	1 Step 20 Min.@ 65°C	1 Step 55 Min.@ 55°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
Ambient Cure Time Mil-I-46058C /	72 Hrs.	<15 Hrs.	<15 Hrs	72 Hrs.	72 Hrs.	24 Hrs.	24 Hrs.
IPC-CC-830 Qualified		YES	YES	YES	YES	YES	YES
UL 94 Rated		V-0	V-0	V-0	V-0	V-0	V-0
Solids Content (% by weight)	47%	Aerosol 7% Bulk 17%	Bulk 24%	Aerosol 11% Bulk 14%	Bulk 55%	Aerosol 16% Bulk 25%	Aerosol 7% Bulk 20%
Viscosity (centipoise)	Bulk 60-70	Aerosol 10-20 Bulk 15-25	Bulk 55-60	Aerosol 4-10 Bulk 4-10	Bulk 70-80	Aerosol 15-25 Bulk 15-25	Aerosol 12-22 Bulk 10-20
UV Indicator	NO	YES	YES	YES	YES	YES	YES
Operating Temp Range	-65° to 200° 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
Dielectric Strength	1 kV/Mil	1 kV/Mil	1 kV/Mil	1.1 kV/Mil	1.1 kV/Mil	560 V/Mil	380 V/Mil
Dielectric Constant				2.66	2.66	2.5	3.8
Insulation Resistance (ohms)		4.89 x 10 ¹⁶	4.89 x 10 ¹⁶	6.87 x 10 ¹⁵	6.87 x 10 ¹⁵	1.33 x 10 ¹⁶	1.78 x 10 ¹⁶
VOC	Bulk 54%	Aerosol 33% Bulk 64%	Bulk 7%	Aerosol 46% Bulk 58%	Bulk 46%	Aerosol 51% Bulk 79%	Aerosol 52% Bulk 80%

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



TURBO-COAT™

Acrylic Conformal Coating

- 2108-12S** 12 oz. (355ml) aerosol
- 2108-P** 1 pt. (473ml) can
- 2108-G** 1 gal. (3.8L) can
- 2108-5G** 5 gal. (19L) pail



2108-12S

- Fastest cure – dry to touch in 3 minutes!
- Low toxicity
- No Toluene, Xylene or MEK
- UL94 V-0 rated – nonflammable final coat
- Fast & easy rework & repair
- UV indicator for black light QC inspection

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

TURBO-COAT HV™

Acrylic Conformal Coating

- 2109-P** 1 pt. (473ml) can
- 2109-G** 1 gal. (3.8L) can
- 2109-5G** 5 gal. (19L) pail



2109-G

2109-5G

- Designed for selective sprayers
- Low toxicity
- No Toluene, Xylene or MEK
- Dry to touch in under 10 minutes!
- UL94 V-0 – nonflammable final coat

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

FINE-L-KOTE™ UR

Urethane Conformal Coating

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



2104-12S

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

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

Conformal Coating Remover

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

- 2510-N** 10 ml pen
- 2510-P** 1 pt. (473ml) can



2510-P



2510-N

- Fast stripping action
- Non-corrosive
- Rapid evaporation

FINE-L-KOTE™ Thinner

Thin Fine-L-Kote coatings to meet production requirements.

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



Turbo-Coat Thinner

If viscosity needs to be lowered, Turbo-Coat Thinner is ideally matched to Turbo-Coat coatings.

- 2110-P** 1 pt. (473ml) can
- 2110-G** 1 gal. (3.8L) can



2110-G

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.

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



Washable Masks *Used with aqueous cleaning processes.*

WonderMASK WSOL

Water-washable mask, safe on ion beds and filters

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

2204-8SQ 8 fl. oz. (237mL) squeeze bottle
2204-G 1 gal. (3.8L) bottle



2204-8SQ

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

WonderMASK W

Nonflammable, water-washable

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.

Hand Applications:

2205-8SQ 8 fl. oz. (237mL) squeeze bottle
2205-G 1 gal. (3.8L) bottle

Robotic & Pneumatic Applications:

2206-G 1 gal. (3.8L) bottl



2205-8SQ

- Water washable
- Non-corrosive
- Low odor
- Nonflammable

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

TEMPORARY SOLDER MASK SELECTION GUIDE

PRODUCT	APPLICATION	VISCOSITY	SUGGESTED THICKNESS	THINNER	CURE TIME	REMOVAL
PEELABLE						
2211 WonderMASK P	Template, Hand, Pneumatic, Robotic	28,000 – 32,000 cps	20 – 30 mils	D.I. Water	1 hr. Ambient 30 min. @65° C 20 min. @82° C	Peelable
2222 WonderMASK PX	Hand Applied	9,000 – 16,000 cps	15 mils	D.I. Water	15 min. Ambient	Peelable
TC-533 Techform	Hand Applied	9,000 – 15,000 cps	15 mils	D.I. Water	1 hr. min. Ambient 30 min. @65° C	Peelable
WATER-SOLUBLE						
2204 WonderMASK WSOL	Hand, Pneumatic	11,500 – 15,500 cps	5 – 15 mils	Methanol	30 min. @65° C	Soluble in Water 49° C or higher
2205 WonderMASK W	Hand Applied	8,000 – 12,000 cps	10 – 15 mils	D.I. Water	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	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 PX

Natural latex peelable solder mask with fastest cure time.

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.

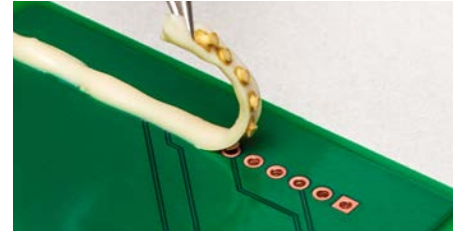
Specifications: Meets MIL-STD-2000 paragraph 5.3.18 parts a, b, and d.

- Fastest full cure
- Easily peelable
- Highest strength to avoid breakage
- Nonflammable

2222-85Q 8 fl. oz. (237ml) squeeze bottle
2222-G 1 gal. (3.8L) bottle



2222-85Q



WonderMASK PX peels after 15 min.



Typical mask after 15 min.

WonderMASK P

Non-ammoniated, low odor peelable mask

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

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

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



2211-85Q

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



Techform TC-533 Peelable Mask

Kester peelable mask is a high-temperature flexible solder masking compound specially formulated of natural latex rubber. 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. 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.

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

53-4001-0533
1pt. (0.47L) squeeze bottle
53-4003-0533
1 gal. (3.8L) bottle
53-4004-0533
5 gal. (19L) pail



53-4001-0533

Freeze Sprays

Freeze sprays blast fast evaporating liquid that super-chills isolated areas. Used as a troubleshooting aid for intermittently faulting capacitors, resistors, semiconductors, and other defective components. They also increase visibility of cold solder joints, cracks in printed circuit boards and oxidized junctions.

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

Freeze Spray

Pure HFC-134a freeze Spray

- Chills down to -60°F (-51°C)
- Nonflammable
- Safe for energized equipment

1672-10S 10 oz. (283g) aerosol

1672-15S 15 oz. (425g) aerosol

CAN1672-10S 10 oz. (283g) aerosol

Canada compliant packaging



1672-10S



1672-15S



Anti-Static Freeze Spray

ESD-Safe Diagnostic Freeze Spray

1747-10S 10 oz. (283g) aerosol



1747-10S

- Avoids static build-up
- Prevents latent failures
- Chills down to -60°F (-51°C)
- Nonflammable
- No frost buildup

Eco-Freezer

Eco-Friendly Freeze Spray

Eco-Freezer is formulated with new HFO-1234ze propellant, with a fraction of the global warming potential (GWP) of HFC-134a based freeze sprays. HFO-1234ze has a GWP of 6, compared to HFC-134a with GWP of 1300. Eco-Freezer can be a drop-in replacement when GWP needs to be lowered.

1583-10S 10 oz. (283g) aerosol



- Chills down to -49°F (-45°C)
- GWP less than 1/100th of HFC-134a
- Nonflammable
- Non-ozone depleting



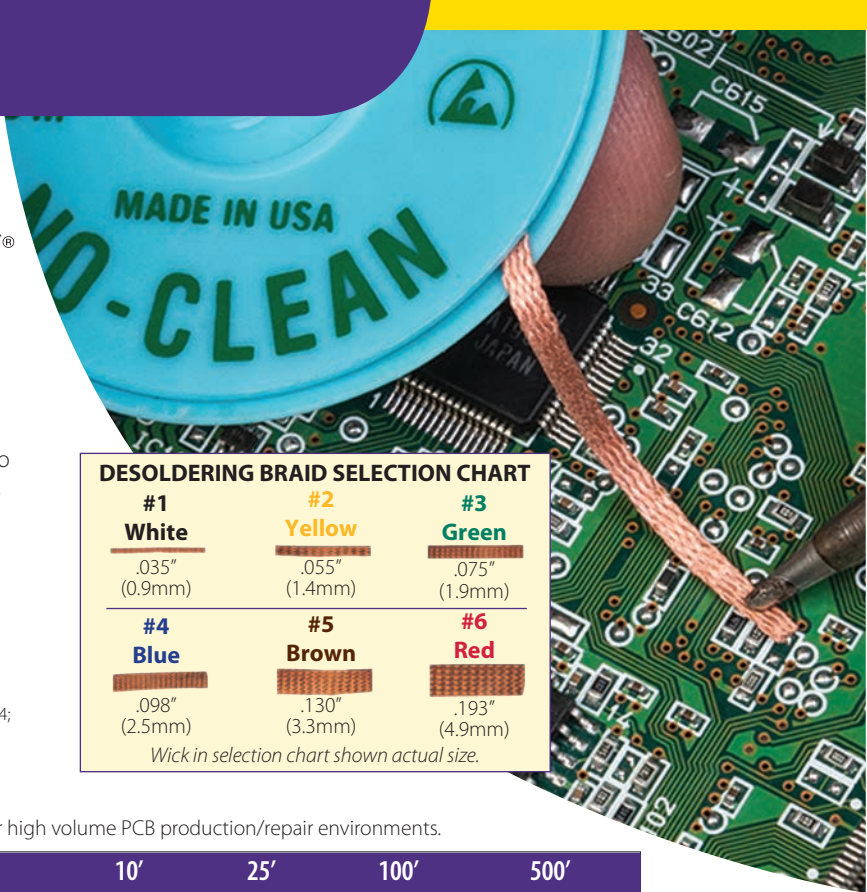
Desoldering Braid

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



DESOLDERING BRAID SELECTION CHART

#1 White	#2 Yellow	#3 Green
.035" (0.9mm)	.055" (1.4mm)	.075" (1.9mm)
#4 Blue	#5 Brown	#6 Red
.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	1810-100F	1803-500F*
1811	#4 Blue	1811-5F	1811-10F	1811-25F	1811-100F	1804-500F*
1812	#5 Brown	1812-5F	—	—	—	—
1813	#6 Red	1813-5F	—	—	—	—

* Not packaged in ESD-safe bobbins

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	—	1820-50F	—
1821	#2 Yellow	1821-5F	1821-10F	1821-25F	1821-50F	—
1822	#3 Green	1822-5F	1822-10F	—	1822-50F	1822-100F
1823	#4 Blue	1823-5F	1823-10F	1823-25F	—	1823-100F
1824	#5 Brown	1824-5F	—	1824-25F	—	—
1825	#6 Red	1825-5F	—	—	—	—

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



Match braid width to contact area



Rework & Repair Pens

TraceTech[™]

Flux Remover Pen

Spot cleaning for PCB rework and repair

2506-N Single-pack of 11.5 ml pen



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

TraceTech[™]

No-Clean Flux Dispensing Pen

No-clean flux applicator pen for PCB rework and repair

2507-N Single-pack of 11.5 ml pen

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



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

TraceTech[™]

Conductive Pen

Silver ink pen for repairing electronic traces

2505-N Single-pack of 4.9 ml pen



- Repairs traces
- Makes smooth jumpers

TraceTech[™]

Overcoat Pen

Resist repair pen for PCB rework and repair

2509-GN Single-pack of 5 ml pen



- Repairs solder resist
- Green to match resist
- Prevents shorting and arcing

TraceTech[™]

Conformal Coating Remover Pen

Spot coating remover in applicator pen for PCB rework and repair

2510-N 10 ml pen

2510-P 1 pt. (0.47L) can



- Fast stripping action
- Non-corrosive
- Rapid evaporation

Heat Sink / Transister Grease

Silicone Heat Sink Compound

Heat sink compound for electrical applications

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



- 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

Silicone-Free Heat Sink Compound

Heat-sink for electronics, avoid silicone contamination

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

1978-1 1 lb. (454g) jar



- 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 silicone contamination
- Easy application
- Will not separate
- Will not harden and crack