

Aviation Cleaning and Maintenance



TECHSPRAY®

TECHSPRAY

PLR⁴TM

AVIATION
DEGREASER

GENERAL PURPOSE DEGREASER
FOR AIRCRAFT AND AIRCRAFT EQUIPMENT

COMPLIANT WITH BOEING
D6-12487 REV. T REQUIREMENTS
STRONG AVIATION DEGREASER
FOR REMOVAL OF
LUBRICATING OILS
NONFLAMMABLE



Maintenance



Avionic Repair

MAINTENANCE

Techspray aviation maintenance cleaners improve performance, efficiency and safety for degreasing, contact cleaning, and aircraft surface cleaning. Clean and maintain corrosion-prone areas like exhaust trail areas, battery compartments and vents, bilge areas, landing gear, cooling vents, wing flap and more.

SAFETY IS THE TOP PRIORITY

Techspray degreasers and contact cleaners are ideal replacements for highly toxic solvents like nPB, TCE and Perc. Greater safety without compromising cleaning performance!



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.



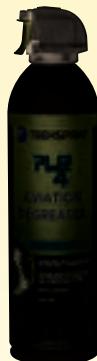
Aviation Degreaser

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

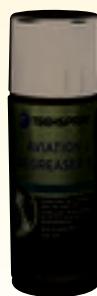
Aviation Degreaser II

NESHAP compliant cleaner for removing hydraulic and lubricating fluids

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

Specifications:

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



TECHSPRAY®

Degreasers



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



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

Specification:
Boeing D6 17487, Rev T



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



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

Degreasers



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

Contact Cleaners



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

Specifications:
Boeing D6 17487, Rev T
Boeing Aircraft 127713



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

Adhesive

Heavy-Duty Adhesive

Strong, fast tacking adhesive

Ideal for cabin equipment manufacturing and repairs like cabin seating, minor carpet repairs, and repairing decorative cabin upholstery.

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



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



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-4™ 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

Liquid Oxygen Validation Solvent

For cleaning and validation of Oxygen Systems Hardware

- Very low non-volatile residue for maximum performance and safety
- No ozone depleting chemicals, low global warming potential
- Azeotropic composition provides excellent composition stability
- Low toxicity
- Fast drying

2996-G 1 gal. (3.8L) bottle



Applications:

- Designed for use in oxygen system cleaning
- Cleaning solvent for critical cleaning applications
- Removes particulates and debris
- Removes fluorocarbon greases and oils used to lubricate fittings

Specifications: meets SAE ARP1176, evaluated and tested in NASA/TP-2015-218207



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-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 filtered to 0.2 microns, fed spec TT-1-735A (amend 3, notice 2) grades A&B, ASTM D770-05



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



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
- NSF registered K1, K2

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



Dusters

Nonflammable Duster

Nonflammable, 100% HFC-134a duster

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

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

NSN 6830-01-335-9925



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

Specifications:

Fed Spec A-A-58060

ARI Standard 700, App. C



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



Specifications:
Fed Spec A-A-58060
ARI Standard 700, App. C



Renew-Duster

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

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

General Purpose Cleaners



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



- Streak-free
- Nonflammable
- Non-ammoniated – safe on sensitive surfaces
- Low VOC, no GWP
- Non-ozone depleting
- NSF registered K1, K2

Glass Cleaner

Foaming aerosol glass and surface cleaner

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



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

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

AVIONIC REPAIR

Techspray products clean and maintain sensitive avionics to prevent corrosion, and ensure reliability of controls, sensors, displays, touch panels, communication and other critical systems. Flux removers quickly and safely blast off corrosive flux residues. Freeze spray helps diagnose faulty components and solder joint. Techspray desoldering braid and TraceTech™ PCB repair products give you the capability to easily remove faulty components and perform trace repair without unsightly and unreliable jumpers. With Techspray, you can repair circuit boards and replace faulty components instead of replacing whole modules.

Solvent Defluxers



Flux Remover

Strong and fast-acting flux remover

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

1631-16S 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



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-G 1 gal. (3.8L) can



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

Conformal Coatings



Acrylic Conformal Coating

Coverage (1 mil dry film):

1 aerosol can - 14 ft² (1.3 M²)

2108-12S 12 oz. (355ml) aerosol



- 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.

FINE-L-KOTE™ UR

Urethane Conformal Coating

Coverage (1 mil dry film):

1 aerosol can - 10 ft² (0.9 M²)

2104-12S 12 oz. (355ml) aerosol

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



FINE-L-KOTE™ HT

High Temperature Silicone Conformal Coating

Coverage (1 mil dry film):

1 aerosol can - 20 ft² (1.9 M²)

2106-12S 12 oz. (355ml) aerosol

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



**TECHSPRAY®**

Freeze Sprays

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

NSN 6850-01-406-1356

Specifications:
McDonnell Douglas 558

1672-10S

1672-15S



Anti-Static Freeze Spray

ESD-Safe Diagnostic Freeze Spray

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

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

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)

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
NSN 6850-01-324-4682Specifications:
MIL-B-81705B

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

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



Avionic Rework & Repair Pens

For fast, easy rework and repair of avionics.

- 2505-N** **Conductive Pen**, 4.9ml Silver ink for repairing traces
- 2506-N** **Flux Remover Pen**, 11.5ml for spot cleaning
- 2507-N** **No-Clean Flux Dispensing Pen**, 11.5ml convenient flux dispenser for soldering
- 2509-GN** **Green Overcoat Pen**, 5ml for repairing solder resist
- 2510-N** **Conformal Coating Remover Pen**, 10ml spot coating remover
- 2510-P** **Conformal Coating Remover**, 1 pt. (0.47L)



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



- 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, harden and crack

Desoldering Braid

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

Pro-Wick® Rosin — ESD-Safe Bobbin

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



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	5'	10'
1808	#1 White / .035" (0.9mm)	1808-5F	1808-10F
1809	#2 Yellow / .055" (1.4mm)	1809-5F	1809-10F
1810	#3 Green / .075" (1.9mm)	1810-5F	1810-10F
1811	#4 Blue / .098" (2.5mm)	1811-5F	1811-10F
1812	#5 Brown / .130" (3.3mm)	1812-5F	—
1813	#6 Red / .193" (4.9mm)	1813-5F	—

	Size	5'	10'
1820	#1 White / .035" (0.9mm)	1820-5F	1820-10F
1821	#2 Yellow / .055" (1.4mm)	1821-5F	1821-10F
1822	#3 Green / .075" (1.9mm)	1822-5F	1822-10F
1823	#4 Blue / .098" (2.5mm)	1823-5F	1823-10F
1824	#5 Brown / .130" (3.3mm)	1824-5F	—
1825	#6 Red / .193" (4.9mm)	1825-5F	—



TECHSPRAY®

Brushes



FRONT VIEW	SIDE VIEW	Product	L Bristle Length	W Bristle Width	T Bristle Trim	Bristle Material	Handle Material	Handle Length
		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)
		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 - 0.25" (6.4mm) B - 0.5" (13mm)	Horse Hair	Stainless Steel	4.5" (11.4cm)
		2032-1	0.5" (13mm)	0.375" (9.5mm)	A - 0.19" (4.8mm) B - 0.25" (6.4mm)	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)

TechSwabs

All swabs shown actual size – 1:1 scale

Cotton TechSwabs

Product	Tip Width	Attachment of Tip	Handle Length	Handle Material	30 Pack Bag	100 Pack Bag	1000 Pack Bag
2300	0.1875" (4.8mm)	Wrapped	6" (15cm)	Wood	—	2300-100	2300-1000

Foam TechSwabs

Product	Tip Width	Attachment of Tip	Handle Length	Handle Material	50 Pack Bag	1000 Pack Bag
2302	0.44" (11.2mm)	Heat Sealed	6" (15cm)	Polypropylene	2302-50	2302-1000
2306	0.5" (13mm)	Heat Sealed	5" (13cm)	Polypropylene	2306-50	2306-1000

For full selection of swabs and wipes, go to www.techspray.com or full line Techspray product catalog.

FOR MORE INFORMATION

TECHSPRAY ANALYSIS & APPLICATION LAB

Techspray Application Lab offers a state-of-the-art cleaning and analytical services to help customers optimize their processes and as required, development customized solutions.

Cleaning equipment includes inline, batch, ultrasonic, and vapor degreasing systems.

Services Include:

- Verify cleaning materials meet customer, industry and regulatory requirements
- Troubleshoot and optimize cleaning processes
- Identify most effective cleaner for specific application
- Compatibility testing for sensitive materials
- Ensure a safer work environment by helping with the move to less toxic solvents.

Free Qualification Testing

Call us today for an on-site evaluation and consultation.



The image shows the Techspray website and the 2017 Product Catalog. The website features a banner for 'PLR 4' Solvent Cleaners and a 'New Product' section. The catalog cover is titled '2017 PRODUCT CATALOG & APPLICATION GUIDE' and shows four product categories: Maintenance & Repair, Precision Cleaning, PCB Assembly, and Rework & Repair, each with a corresponding image of a product bottle.

www.techspray.com



For more information and the full product line for electronics and general industry cleaning and coating, including:

- Aerosol, ultrasonic & vapor degreaser solvent cleaners
- PCB rework & repair products
- Full line of wipes, swabs & brushes

 **Contamination Control**
Electronics

Techspray - US Office
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678-819-1408
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tsales@techspray.com

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The Netherlands
+31 88 1307 400
info@itw-cc.com

Techspray - China Office
ITW Specialty Materials (Suzhou) Co., Ltd
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