



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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# TECHSPRAY®



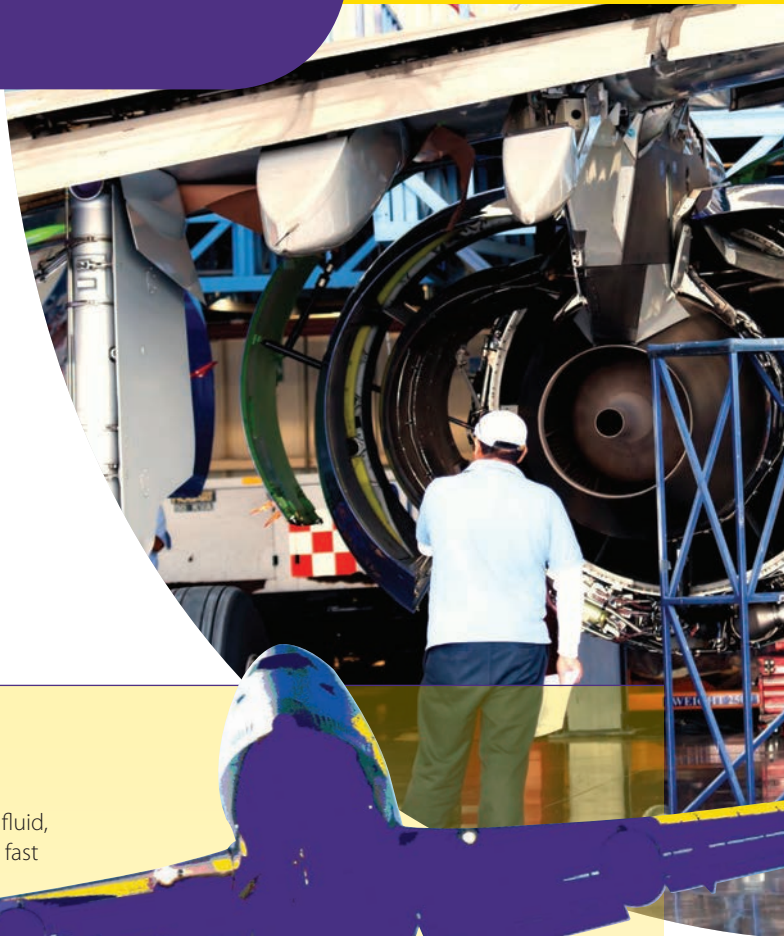
Maintenance



Avionic Repair

## MAINTENANCE

Techspray aviation maintenance cleaners improve performance, efficiency and safety for degreasing, contact cleaning, and aircraft surface cleaning. Degreasers and contact cleaners remove a wide variety of soil, oil, grease, oxides, and baked-on lubricants. Formulas available to maximize cleaning power and comply with stringent environmental regulations. Clean and maintain corrosion-prone areas like exhaust trail areas, battery compartments and vents, bilge areas, landing gear, cooling vents, wing flap and more.



### 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



## 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



3400-20S

3400-G



### 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



1638-G

1638-5G

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



## Degreasers



### 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



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

Specifications:  
NESHAP 63.741-753



### 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



1622-10S



1622-13S

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

## 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.



### 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

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



1610-5G

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**





## 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



1671-10S 1671-15S

- 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

### 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.*



## General Purpose Cleaners



### 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.*

### 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



### 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



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

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



### 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



### 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



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





## 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

### Anti-Static Freeze Spray

*ESD-Safe Diagnostic Freeze Spray*

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



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

## ESD Products

### LICRON CRYSTAL

*Permanent ESD Coating*

- Rugged static dissipative coating
- Surface resistivity of 10<sup>6</sup> To 10<sup>9</sup> 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 200ft<sup>2</sup>)



### 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 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 6850-01-324-4682



### 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



Specifications:  
 MIL-B-81705B



## Rework & Repair Pens

### TraceTech<sup>™</sup>

#### 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<sup>™</sup>

#### 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<sup>™</sup>

#### Conductive Pen

*Silver ink pen for repairing electronic traces*

2505-N Single-pack of 4.9 ml pen



- Repairs traces
- Makes smooth jumpers

### TraceTech<sup>™</sup>

#### 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<sup>™</sup>

#### Conformal Coating Remover Pen

*Spot coating remover in applicator pen for PCB rework and repair*

2510-N 10 ml pen



- 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



- 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





## Desoldering Braid

Techspray wick is available in static dissipative bobbins 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

### 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'
1808	#1 White	1808-5F	1808-10F
1809	#2 Yellow	1809-5F	1809-10F
1810	#3 Green	1810-5F	1810-10F
1811	#4 Blue	1811-5F	1811-10F
1812	#5 Brown	1812-5F	—
1813	#6 Red	1813-5F	—



#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.*

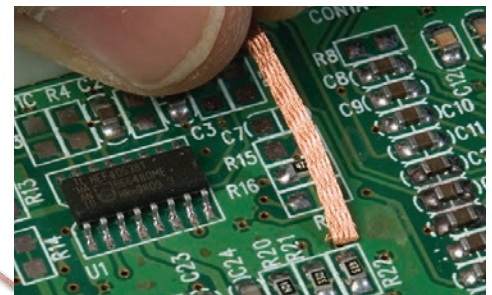
### No-Clean Wick — ESD-Safe Bobbin

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'
1820	#1 White	1820-5F	1820-10F
1821	#2 Yellow	1821-5F	1821-10F
1822	#3 Green	1822-5F	1822-10F
1823	#4 Blue	1823-5F	1823-10F
1824	#5 Brown	1824-5F	—
1825	#6 Red	1825-5F	—



Specifications:  
MIL-F-14256  
NASA NHB 5300, 4 (34-1)  
NASA NPC 200-4  
NASA SP5002  
IPC Standard-J-STD-004



Match braid width to contact area

### Unfluxed Wick — ESD-Safe Bobbin



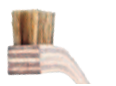






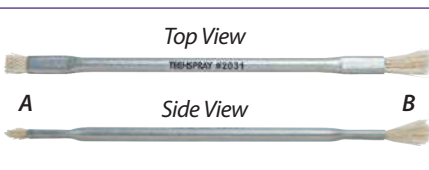




For customers who use water-soluble flux, or their own flux for aqueous processes.

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



## Brushes




FRONT VIEW	SIDE VIEW	Product	L Bristle Length	W Bristle Width	T Bristle Trim	Bristle Material	Handle Material	Handle Length
		<b>2020-1</b>	1.375" (35mm)	0.25" (6.4mm)	0.44" (11mm)	Horse Hair	Wood	7.75" (19.7cm)
		<b>2021-1</b>	1.375" (35mm)	0.25" (6.4mm)	0.44" (11mm)	Hog Bristle	Wood	7.75" (19.7cm)
		<b>2022</b>	2.125" (54mm)	0.875" (22mm)	0.75" (19mm)	Hog Bristle	Wood	8.375" (21.3cm)
		<b>2030-1</b>	0.125" (3.2mm)	0.0625" (1.6mm)	0.125" (3.2mm)	Goat Hair	Stainless Steel	3.5" (8.9cm)
		<b>2031-1</b>	0.25" (6.4mm)	0.19" (4.8mm)	<b>A</b> - 0.25" (6.4mm) <b>B</b> - 0.5" (13mm)	Horse Hair	Stainless Steel	4.5" (11.4cm)
		<b>2032-1</b>	0.5" (13mm)	0.375" (9.5mm)	<b>A</b> - 0.19" (4.8mm) <b>B</b> - 0.25" (6.4mm)	Horse Hair	Zinc Plated Steel	4.5" (11.4cm)
		<b>2033-1</b>	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
<b>2300</b>	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
<b>2302</b>	0.44" (11.2mm)	Heat Sealed	6" (15cm)	Polypropylene	2302-50	2302-1000



*Cotton Bud Wrapped in Foam, Rigid Head*

<b>2306</b>	0.5" (13mm)	Heat Sealed	5" (13cm)	Polypropylene	2306-50	2306-1000
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*Rigid Head*

For full selection of swabs and wipes, go to [www.techspray.com](http://www.techspray.com) or full line Techspray product catalog.



FOR MORE INFORMATION



[www.techspray.com](http://www.techspray.com)

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- Shear cutters
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