

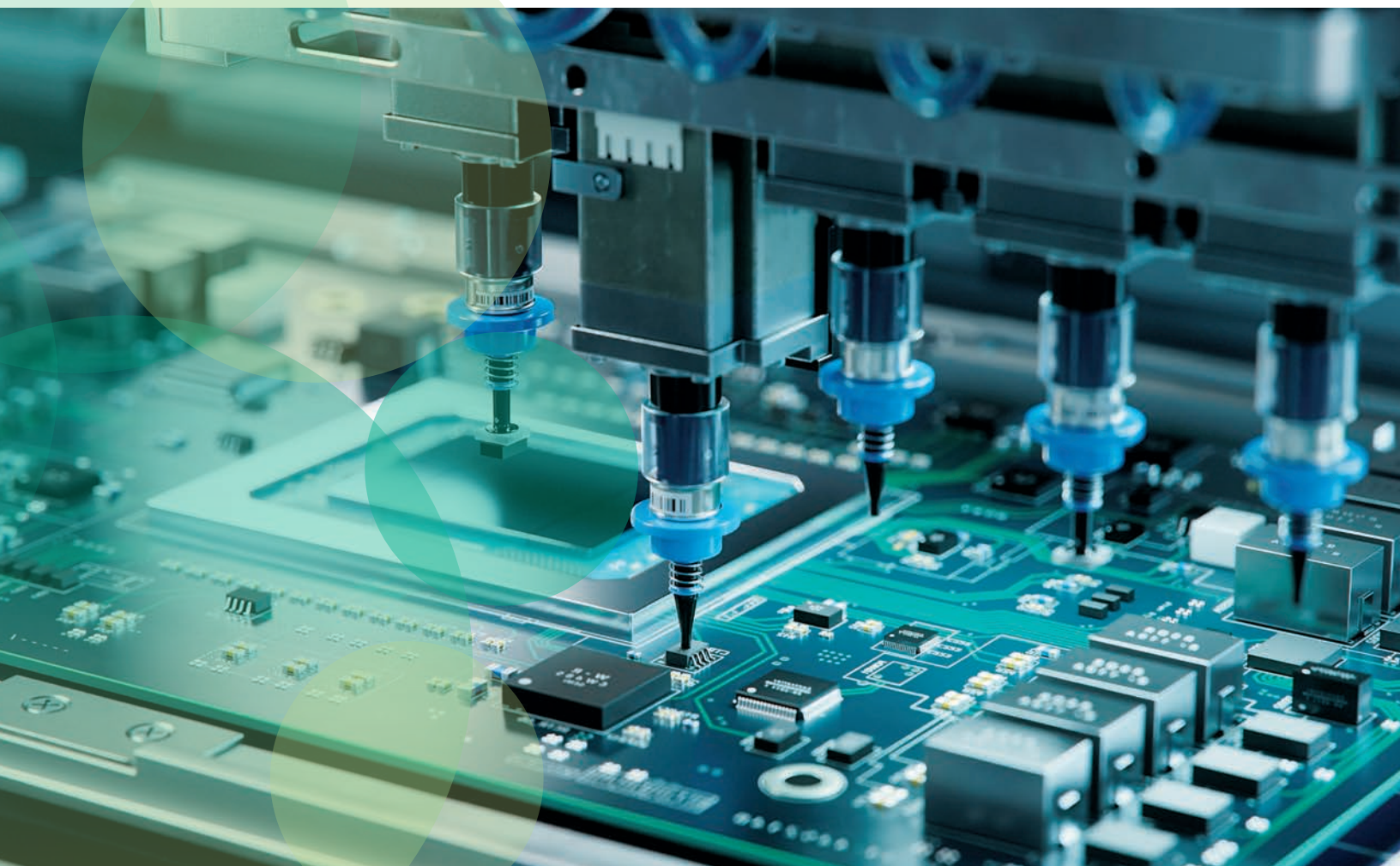




# Surface Treatment Technologies for Electronics Cleaning

Solutions for every surface – Vantage has you covered.

-  Defluxers & Cleaning Solutions for PCBAs, Semiconductor, Components
-  Rework Cleaning Solutions
-  Maintenance Cleaning Solutions



## Surface Treatment Technologies for Electronics Cleaning

### Complete Solution

For more than 45 years, Vantage Surface Treatment Technologies (STT) has manufactured and supplied high reliability cleaning products and surface treatments for the electronic component and printed circuit board assembly (PCBA) market. Our products are designed for use in standard inline and batch defluxing systems, stencil and misprint cleaning equipment as well as vapor degreasing systems. We also offer a complete portfolio of manual hand-wipe cleaning products which are ideal replacements for isopropyl alcohol (IPA).

### Trusted Brands

Marketed under the following brands, these products are specially formulated to meet today's performance, compatibility and environmental requirements.

- AXAREL™
- BIOACT™
- LENIUM™
- HYDREX
- RE-ENTRY™

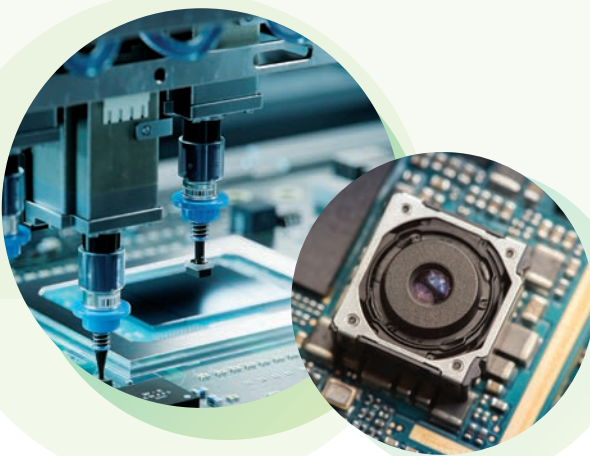
### Applications & Processes

Vantage electronics cleaning products are used in the following areas:

- PCBAs for Aerospace, Auto, Defense, Medical
- Wafer level packages and bumped wafers
- PCBA equipment
- Power and ignition modules
- Pallets
- RF and microwave devices
- Flip chips, MCMs, SiPs, BGAs, CSPs, & Hybrid Electronics
- Probe cards
- Sensors – pressure, temperature, optical
- Stencils

### Contaminates Removed

- No-clean flux residue
- RA/RMA flux residue
- Water-soluble flux residue
- Misprinted (raw) solder paste
- Ionic contamination
- Uncured surface mount adhesive
- Particulate matter
- Baked-on-grease/ oil
- Mold release agents
- Rubber/ elastomers
- Plastics/ resins
- Shop dirt
- Fingerprints
- Dust



# Defluxers & Cleaning Solutions for PCBAs, Semiconductors, Components

High-performance cleaning solutions engineered to remove water-soluble, no-clean, and rosin flux residues — ideal for defluxing in advanced electronics PCBA and semiconductor manufacturing.

## Spray-in-Air Applications

<b>BIOACT™ EC-3G</b> Versatile spray defluxer	Engineered for automated defluxing in inline and batch systems, this low-foaming cleaner removes all flux types while protecting solder masks and components.	Inline & Batch Systems	5-25%	140-160°F (60-70°C)
<b>BIOACT EC-88</b> Inline spray defluxer	Optimized for high-throughput inline defluxing, this solution removes tough flux residues without damaging solder masks or components.	Inline Systems	10-25%	120-160°F (50-70°C)
<b>BIOACT EC-78</b> Extended-cycle batch defluxer	Low-foaming defluxer with corrosion inhibitors, ideal for extended batch spray cycles and effective on all flux residue types.	Batch Systems	5-25%	0-160°F (50-70°C)

## Immersion Applications

<b>BIOACT EC-15</b> Heavy-duty flux remover	High flashpoint cleaner engineered to remove baked-on flux residues in heated systems; ideal for high-reliability microelectronics cleaning.	Spray-Under-Immersion; Ultrasonics	100%	140-180°F (60-82°C)
<b>AXAREL™ 32</b> High-reliability defluxer solvent	High flashpoint cleaner ideal for removing flux and ionic contaminants in enclosed, heated systems. Low odor solvent with excellent polymer and solder mask compatibility.	Spray-Under-Immersion; Ultrasonics	100%	Ambient to 160°F (71°C)
<b>BIOACT EC-7R</b> Versatile semi-aqueous defluxer	Fast-separating, high-solvency cleaner that works at ambient temp to strip all flux types; quick water split enhances bath life and rinse efficiency in production.	Spray-Under-Immersion; Ultrasonics	100%	Ambient

## Single Solvent Vapor Applications

<b>LENIUM™ ES</b> nPB defluxing solution	Stabilized n-Propyl Bromide solvent for vapor degreasing and defluxing; highly effective on RMA flux residues.	Mono-Solvent	100%	148-151°F (64-66°C)
<b>LENIUM MVS1</b> PFAS-free fluorinated defluxing solution	PFAS-free, non-flammable solvent with low surface tension; ideal nPB, TCE, and HAP replacement for cleaning under components.	Mono-Solvent	100%	114°F (45.6°C)

## Dual Solvent Vapor Applications

Paired Chemistry Process

<b>LENIUM RZ2</b> PFAS-free, Trans-free rinsing agent	PFAS- and trans-DCE-free solvent for co-/bi-solvent vapor degreasing; safer nPB/TCE alternative with customizable performance using SOLVAG™ SA-24.	Co-Solvent	~40-60%	129.2°F (54°C)
		Bi-Solvent	100%	
<b>SOLVAG SA-24</b> Solvating agent	Low-volatility solvating agent optimized to remove all flux type in co-/bi-solvent vapor degreasing with LENIUM RZ2. Broad compatibility with electronic substrates and materials.	Co-Solvent	~40-60%	148-151°F (64-66°C)
		Bi-Solvent	100%	



# Maintenance Cleaning Solutions

Precision cleaning solutions designed to remove raw solder paste and flux residues from stencils, wave solder pallets and assembly equipment — optimized for use in automated cleaning systems and under-stencil wipe applications.

## Spray-in-Air Applications

<b>HYDREX™ SC-2075</b> Rinse-free cleaner	Neutral pH, low-VOC cleaner removes solder paste and adhesives with optional rinse; streak-free, ideal for batch spray stencil cleaning.	Spray-In-Air Equipment	5-15%	115-130°F (46-54°C)
<b>HYDREX SP-50</b> Water-rinsable cleaner	Removes solder paste, adhesives, and flux residues in batch spray-in-air systems. Concentrated solution, ideal where aggressive performance is needed.	Spray-In-Air Equipment	5-15%	115-130°F (46-54°C)
<b>HYDREX EMC-20</b> Spray pallet cleaner	VOC-free cleaner with built-in corrosion protection, safe on metals and plastics; ideal for wave solder pallet cleaning in spray-in-air systems.	Spray-In-Air Equipment	10-20%	130-150°F (55-65°C)
<b>HYDREX EMC-44</b> Oven & wave solder cleaner	Non-flammable, VOC-free, biodegradable cleaner safely removes flux, grease, oil, and coolants; ideal for reflow and wave solder systems.	Manual Spray or Hand-Wipe	100%	Ambient

## Immersion Applications

<b>HYDREX A-PLUS</b> Aqueous immersion cleaner	Water-rinsable, neutral-pH cleaner removes solder paste, adhesives, and ionics; safe for nano-coated stencils and ultrasonic immersion cleaning.	Immersion; Ultrasonics	5-15%	100-170°F (40-80°C)
<b>BIOACT SC-22</b> Solvent immersion cleaner	Effective ambient-temp IPA alternative for immersion cleaning; removes solder pastes, adhesives, and fluxes efficiently.	Immersion; Ultrasonics	100%	Ambient to 125°F (49°C)
<b>HYDREX EMC-86</b> Immersion pallet cleaner	Electronics maintenance cleaner for wave solder pallets; effective in soak, agitated immersion, and ultrasonic systems.	Aqueous	Immersion; Ultrasonics	10-20%

## Printer Underwipe & Manual Applications

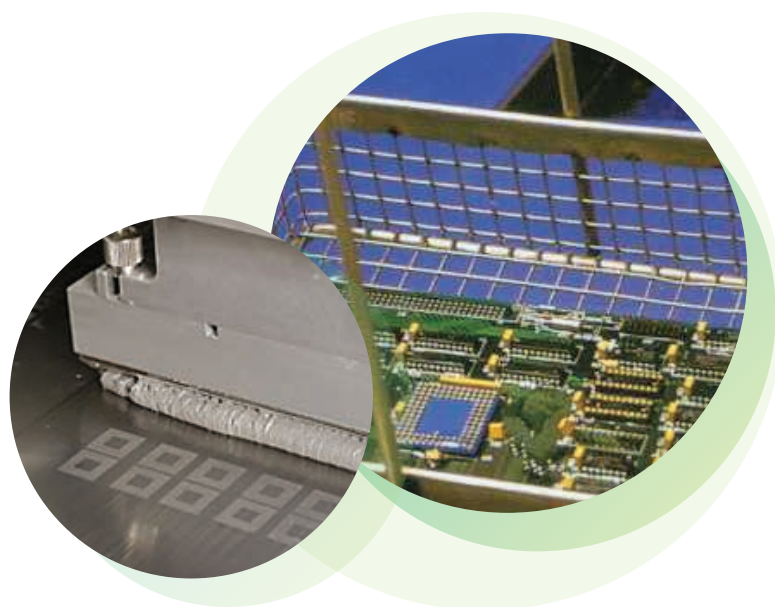
<b>HYDREX SC-30 RTU</b> Aqueous underwipe cleaner	Ready-to-use aqueous cleaner for stencil printers with automated wiping; safe IPA alternative, nitrogen- and phosphorus-free.	Underwipe	100%	Ambient
<b>AXAREL 2200</b> Versatile solvent cleaner & defluxer	Multi-purpose manual cleaner for stencils and misprints; IPA replacement with higher flash point; compatible with some automated wiping systems.	Underwipe; Manual Hand-Wipe	100%	Ambient

# Rework Cleaning Solutions

Targeted cleaning and repair solutions for benchtop rework—including flux and conformal coating removal — to restore reliability in high-value electronic assemblies.

## Rework Cleaning Solutions

<b>BIOACT SC-22</b> Versatile core cleaner	Versatile cleaner ideal for stencil and misprint recovery in immersion systems. Removes solder pastes, flux residues, and adhesives in immersion cleaning systems.	Immersion; Ultrasonics
<b>AXAREL 2200</b> Fast-drying multi-purpose solvent cleaner	Fast-drying IPA replacement with broad solvency for stencils, metals, and ceramics; ideal for VOC-limited environments and operator-safe wipe-down applications.	Immersion; Manual Hand-Wipe
<b>BIOACT SC-10</b> High-solvency flux cleaner	Citrus-based cleaner for fast manual cleaning of fluxes, pastes, and adhesives. IPA alternative.	Immersion; Manual Hand-Wipe
<b>BIOACT CCR-8</b> Conformal coating remover	Bio-based solvent ideal for removing silicone and acrylic coatings; lower-risk alternative to acetone and MEK in electronics assembly and maintenance.	Immersion; Manual Hand-Wipe



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