



## Surface Treatment Technologies For Aerospace & Defense



**Coating & Paint Removers**



**Exterior Cleaners & Surface Treatments**



**Cleaning Solutions For Components & Assemblies**



**Manual Cleaners**



**Gas Path Turbine Engine Cleaners**



**Avionics Cleaners**



## COATING & PAINT REMOVERS

Product	Description	Approvals & Conformance
<b>B&amp;B™ 9095</b> Aircraft Paint Remover	Military qualified aircraft paint remover. Designed to remove epoxy primers, polyurethane topcoats and other paint systems from exterior aircraft surfaces. 18-month shelf life. Non-drying. Low odor.	TO 1-1-8, TO 1-1-24, MIL-PRF-32587, C-130 LES, Boeing DPM 5549, Boeing BMS 10-144, Boeing DPS 9.316-3, Boeing D6-17487 (BSS 7432), Douglas CSD #1, Tinker AFB QPL Purchase Description OC-LC-2009-01, Lockheed Martin C-130 NTO, RAF NTO, Lockheed Martin EMAP G32.2356
<b>B&amp;B 3095</b> Aircraft Paint Remover	Thickened paint remover designed to remove epoxy primers, base coats, clear coats and other paint systems from exterior aircraft surfaces. Conforms to key commercial OEM specifications. 18-month shelf life. Non-drying. Low odor.	United Airlines, SAE MA4872A, Boeing D6-17487 (BSS7432), Douglas CSD #1, ASTM F 519, ASTM F 483, ASTM F 1110, ASTM F 1080, Corrosion Test for Dissimilar Metals, Al/Cad Plate, Al/Ti, Ti/Cad Plate, Ti/Mg
<b>APR™ 2260</b> Aircraft Paint Remover	Safe, versatile paint remover designed for easy spraying of aircraft exterior surfaces. 12 month shelf life.	ASTM F483, ASTM F519, Dissimilar Metal Corrosion Test (Al/Steel, Al/St Cad Plate, Al/Ti, Ti/St, Ti/Mg, Al/Mg), Residue Corrosion Test (Al/Steel, Al/St Cad Plate, Al/Ti, Ti/St, Ti/Mg, Al/Mg)
<b>B&amp;B 9201</b> Immersion Paint Remover	Heated immersion paint remover for aircraft wheels, landing gears and other aircraft components. Does not contain nMP. Uses a oil seal to safeguard against evaporative loss.	MIL-PRF-83936C Type I
<b>B&amp;B 5151-B/-M</b> Polysulfide Sealant & Coating Remover	Gelled solution formulated to remove polysulfide sealants and coatings from aircraft structures. Does not contain nMP. Removes 3M, Royal, Flamemaster sealants.	TO 1-1-8 (B), TT-R-2918 (M)



## EXTERIOR CLEANERS & SURFACE TREATMENTS

Product	Description	Approvals & Conformance
<b>PCR™ 1640</b> Prepaint Corrosion Remover	AMS 1640 conforming liquid acid etchant. Removes corrosion from aluminum aircraft surfaces prior to conversion coating, painting, anodizing, or welding. Does not contain hydrofluoric acid.	SAE AMS 1640C (Supersedes MIL-C-38334), Corrosion Removing Compound for Aircraft surfaces
<b>BIOACT™ 108</b> CIC Remover & Solvent Cleaner	Corrosion Inhibited Compound (CICs) Remover. Effectively cleans Cor-ban® 23 & 35, ARDROX® AV-8 and other difficult-to-remove soils. Replaces MEK and other hazardous solvents.	American Airlines, Boeing BAC 5750 & BAC 5355, Airbus AIMS 09-00-002, SAE AMS 1526C, Boeing D6-17487 (BSS 7432), Douglas CSD #1
<b>BIOACT 145</b> CIC Remover & Solvent Cleaner	Non-citrus CIC remover and general solvent cleaner for oils, greases, hydraulic fluids. Flash point above 140°F (60°C). May be used in confined areas such as bilges and equipment bays.	Airbus AIMS 09-00-002, American Airlines, Boeing D6-17487 (BSS 7432), Douglas CSD #1, Gulfstream
<b>B&amp;B JET-22C</b> Aircraft Cleaner	All-purpose liquid aircraft exterior cleaner used undiluted or mixed with water.	Airbus AIMS 09-00-002, Boeing D6-17487 (BSS 7432), Douglas CSD #1, SAE AMS 1526C
<b>B&amp;B CONTACT XL</b> Aircraft Dry Wash	Wipe-on, wipe-off dry wash solution for aircraft exteriors. Rejuvenates paint. Reduces soil redeposition.	Boeing D6-17487, Douglas CSD #1, United Airlines
<b>B&amp;B JET-7</b> Aircraft Cleaner	Ready-to-use liquid aircraft exterior cleaner for dirt, grime, light oil and hydraulic fluid e.g. Skydrol®. Qualified to MIL-PRF-87937. May be used in confined areas such as bilges and equipment bays.	MIL-PRF-87937 Type IV, Airbus AIMS 09-00-002, Boeing D6-17487 (BSS 7432)
<b>B&amp;B RE-GEL</b> Aircraft Cleaner	Gel-type aircraft exterior cleaner for light to medium soils. Qualified to MIL-PRF-87937. Clings well to inverted and verticals surfaces including wheel wells and undercarriage areas.	MIL-PRF-87937 Type III, Airbus AIMS 09-00-002, Boeing D6-17487 (BSS7432)
<b>B&amp;B 8525</b> Aircraft Cleaner	Concentrated liquid aircraft exterior cleaner for heavily soiled areas. Qualified to MIL-PRF-85570.	MIL-PRF-85570 Type II, Boeing D6-17487 (BSS7432)
<b>B&amp;B 1995</b> Aircraft Cleaner	Concentrated gel-type aircraft exterior cleaner for heavy soils. Clings well to inverted and vertical surfaces including wheel wells and undercarriage areas. Qualified to MIL-PRF-85570.	MIL-PRF-85570 Type V
<b>B&amp;B CONTACT X</b> Aircraft Cleaner	Low abrasive spot cleaner for thrust, smoke trail and rocket blast areas.	MIL-PRF-85570 Type III
<b>B&amp;B Sparkle A</b> Windshield Cleaner	Non-streaking, water-based windshield cleaner. Safe and effective on glass and acrylics.	Alaska Airlines, American Airlines, United Airlines, Horizon Air, Piedmont Airlines, SkyWest Airlines
<b>B&amp;B Odor Out</b> Deodorizer	Deodorizer for aircraft cabin interiors.	American Airlines, United Airlines

Please contact a Vantage sales professional for a detailed list of our aerospace approvals and conformance test data.



## CLEANING SOLUTIONS FOR COMPONENTS & ASSEMBLIES

Product	Description	Approvals & Conformance
<b>CleanSafe™ 787C</b> Aqueous Cleaner	Very low-foaming aqueous solution for spray and agitated immersion cleaning equipment. Excellent in cabinet parts washing systems.	Bell Helicopter, Boeing BAC 5763 & BAC 5749, Boeing Defense Sys HMS20, CFM, Engine Alliance, GE Aviation C04-289, Honeywell, Messier-Dowty PCS-2621, Pratt & Whitney PMC 1465, Rolls-Royce CSS/OMat, Safran In-1500, Spirit AeroSystems, United Airlines
<b>CleanSafe 686</b> Aqueous Cleaner	Concentrated aqueous solution for ultrasonic cleaning equipment.	ASTM F-484, F-519, F-945 (10%), F-1111 (10%), Pratt & Whitney Rev E Hot Corrosion (10%)
<b>B&amp;B TC-100</b> Aqueous Cleaner	Aqueous immersion cleaner for aircraft heat exchangers. Also used for gas path turbine engine cleaning.	MIL-C-85704 Type II, Airbus (Application Code 08AJA9/869200), Airbus AIMS 09-00-002, Boeing D6-17487 (BSS 7432), Boeing APU Prop-BN82T-C89-461, Boeing 747 AMM 49-11-00, Boeing 737 AMM, CFM (CP5060), Douglas CSD #1, GE Aviation (C04-140), Honeywell CMM (Heat Exchanger Cleaning), Pratt & Whitney CPMC 79038, Pratt & Whitney Canada EMM, United Airlines, SAE AMS 1550A
<b>AXAREL™ 2000</b> Solvent Cleaner	MIL-PRF-680 Type II solvent. Very low odor. Flash point above 140°F (60°C). Used for manual cleaning and in solvent parts washing basins.	MIL-PRF-680 Type II, Airbus CML (08BBB1), American Airlines, Boeing BAC 5750, Embraer, Honeywell, Lockheed-Martin, Messier-Bugatti, Pratt & Whitney, Rolls-Royce, United Airlines, UTAS
<b>AXAREL 3000</b> Solvent Cleaner	MIL-PRF-680 Type III. Very high flash point (>200°F/93°C) solvent used to remove greases, oils. May also be used in heated immersion tanks.	MIL-PRF-680 Type III, Airbus CML (08BBB1), Boeing BAC 5750, Honeywell, Lockheed-Martin, Messier-Bugatti, Pratt & Whitney, United Airlines, UTAS
<b>AXAREL PD-680-II</b> Solvent Cleaner	PD-680 Type II general purpose solvent degreaser for manual and solvent parts washing.	A-A-59601E Type II (PD-680 CID), Airbus CML (08BBB1)
<b>AXAREL PD-680-III</b> Solvent Cleaner	PD-680 Type III general purpose solvent degreaser for manual and solvent parts washing.	A-A-59601E Type III (PD-680 CID), Airbus CML (08BBB1)
<b>AXAREL 56</b> Solvent Cleaner	Water-rinsible solvent cleaner for heated immersion equipment. Removes greases, heavy soils.	Boeing BAC 5200 & BAC 5763, GE Aviation, Messier-Dowty
<b>LENIUM™ GS</b> Vapor Degreasing Solution	Vapor degreasing solution based on stabilized n-Propyl Bromide (nPB).	Bell Helicopter, Boeing BAC 5408, Embraer, Lockheed-Martin EMAP, Messier-Dowty, Praxair, Safran In-1500, Scott Aviation, UTAS LGPS 1400
<b>LENIUM FHD</b> Vapor Degreasing Solution	Vapor degreasing solution. Alternative to nPB, TCE and PERC. Does not require acid acceptance testing.	American Airlines, Boeing BAC 5408 & BAC 5750, Boeing D6-17487 (BSS 7432), Douglas CSD #1, Lockheed-Martin EMAP, Rolls-Royce OMat, Safran Power Systems
<b>LENIUM HFT</b> Vapor Degreasing Solution	Vapor degreasing solution. Alternative to nPB, TCE and PERC. Complies with EU F-gas regulations. Does not require acid acceptance testing.	Airbus AIMS 09-00-002, Boeing BSS 7432, Douglas CSD #1
<b>BIOACT 280</b> <b>BIOACT 280E</b> Wax Remover	Bio-based cleaner for masking wax and fixturing compounds. 18-24+ month bath life. Replaces perchloroethylene (PERC) and trichloroethylene (TCE).	Boeing D6-17487 (BSS 7432), CFM, GE Aviation, Honeywell, IAE, Pratt & Whitney PMC 8913, Rolls-Royce CSS/OMat
<b>AEROWAX™ MT</b> Wax Maskant	Medium melt point masking wax used for selective plating operations. 168-180°F (76-82°C) melt point range.	Pratt & Whitney PMC 9551 Masking Wax Compound, PWA 36604 Revision D Stress Corrosion
<b>AEROWAX HT</b> Wax Maskant	High melt point masking wax used for selective plating operations. 180-190°F (82-88°C) melt point range.	

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## MANUAL CLEANERS

Product	Description	Approvals & Conformance
<b>BIOACT 105 &amp; BIOACT 105 Wipes</b> Solvent Cleaner	Fast drying cleaner used to replace isopropyl alcohol (IPA), acetone and methyl ethyl ketone (MEK) for general purpose degreasing and surface preparation. Low EHS impact.	SAE AMS 3167 QPL, Airbus AIMS 09-00-002, American Airlines, Bell Helicopter, Boeing D6-17487 (BSS 7432), Douglas CSD #1, Bombardier BAPS 180-009 General & Q400 AMM, CFM, GE Aviation, Gulfstream, Honeywell, IAE, Pratt & Whitney PMC 8929, Rolls-Royce CSS/OMat, United Airlines, AMS 1526, AMS 3819 (BIOACT 105 Wipes)
<b>BIOACT 108</b> Solvent Cleaner	Solvent cleaner for Corrosion Inhibiting Compounds (CICs) e.g. Cor-ban® 23 & 35, ARDROX® AV-8. Also removes hydraulic fluids e.g. Skydrol®, adhesive residues and other soils. MEK replacement.	Airbus AIMS 09-00-002, American Airlines, Boeing BAC 5750 & BAC 5355, Boeing BMS11-14A, Boeing D6-17487 (BSS 7432), Douglas CSD #1, AMS 1526C
<b>AXAREL 1000</b> Solvent Cleaner	MIL-PRF-680 Type I solvent. Good dry times. Essentially no odor.	MIL-PRF-680 Type I, Airbus CML (08BBB1), American Airlines, Boeing BAC 5750, Embraer, Honeywell, Lockheed-Martin, Pratt & Whitney, Rolls-Royce, United Airlines
<b>AXAREL 2000</b> Solvent Cleaner	MIL-PRF-680 Type II solvent. Essentially no odor. Flash point above 140°F (60°C). Used for manual cleaning and in solvent parts washing basins.	MIL-PRF-680 Type II, Airbus CML (08BBB1), American Airlines, Boeing BAC 5750, Embraer, Honeywell, Lockheed-Martin, Messier-Bugatti, Pratt & Whitney, Rolls-Royce, United Airlines, UTAS
<b>AXAREL 4000</b> Solvent Cleaner	MIL-PRF-680 Type IV solvent. Used when a higher flash point (>140°F/60°C) and strong solvency is desired. Mild citrus odor.	MIL-PRF-680 Type IV, Airbus CML (08BBB1), Airbus A330 AMM, Boeing BAC 5750, Embraer, Honeywell, Lockheed-Martin
<b>AXAREL PD-680-II</b> Solvent Cleaner	General purpose solvent degreaser for manual and solvent parts washing.	A-A-59601E Type II (PD-680 CID). Airbus CML (08BBB1)
<b>RE-ENTRY™ Prepsolv</b> Solvent Cleaner & Adhesive Remover	Citrus-based manual cleaner for adhesive residues, hydraulic fluids and CICs.	Boeing BAC 5750



## GAS PATH TURBINE ENGINE CLEANERS

Product	Description	Approvals & Conformance
<b>B&amp;B 3100</b> Gas Path Cleaner	Concentrated liquid compound for gas path, compressor and fuel nozzle cleaning in portable or stationary turbine engines.	MIL-PRF-85704 Type I, Boeing 737 AMM, CFM, GE Aviation, Pratt & Whitney Canada EMM
<b>B&amp;B TC-100</b> Gas Path Cleaner	Aqueous gas path cleaner for turbine engines. Commercial aviation approvals.	MIL-C-85704 Type II, Airbus (Application Code 08AJA9/869200), Airbus AIMS 09-00-002, Boeing D6-17487 (BSS 7432), Boeing APU Prop-BN82T-C89-461, Boeing 747 AMM 49-11-00, Boeing 737 AMM, CFM (CP5060), Douglas CSD #1, GE Aviation (C04-140), Honeywell CMM (Heat Exchanger Cleaning), Pratt & Whitney CPMC 79038, Pratt & Whitney Canada EMM, United Airlines, SAE AMS 1550A
<b>B&amp;B TC-100N-3</b> Gas Path Cleaner	Military qualified aqueous gas path cleaner for turbine engines. Qualified for both on and off-line cleaning of the compressor section.	MIL-PRF-85704 Type II & Type III, Airbus (Application Code 08AJA1), American Airlines, Boeing 737 AMM, GE Aviation, Honeywell CMM (Heat Exchanger Cleaning), Pratt & Whitney PWA 36604 (AMS 5608)
<b>B&amp;B TC-100N-3-RTU</b> Gas Path Cleaner	Military qualified Ready-To-Use (RTU) aqueous gas path cleaner for turbine engines. Qualified for both on and off-line cleaning of the compressor section.	MIL-PRF-85704 Type II RTU & Type III RTU, Airbus (Application Code 08AJA1), GE Aviation

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## AVIONICS CLEANERS

Product	Description
<b>BIOACT CCR-8</b> Conformal Coating Remover	Powerful solvent cleaner designed to remove acrylic & silicone-based conformal coatings. Flash point 120°F (49°C).
<b>AXAREL 2200</b> Solvent Cleaner & Defluxer	Multi-purpose manual cleaner and defluxer for stencils & misprints. Also used in offline cleaning of circuit assembly equipment. Replaces IPA. Flash Point 111°F (44°C). Eliminates white residues. <b>Approved by Honeywell, United Airlines.</b>
<b>BIOACT SC-10</b> Solvent Cleaner & Defluxer	Fast evaporating cleaner ideal for cleaning flux residues. Also removes tape residues & acrylic-based conformal coatings. Replaces IPA. Eliminates white residues. Flash point 105°F (41°C).
<b>BIOACT EC-78</b> Batch Spray Defluxer	Aqueous defluxer for batch and inline spray cleaning equipment.
<b>BIOACT EC-88</b> Ultrasonic Spray Defluxer	Low-foaming cleaner for inline spray equipment. Designed for high throughput operations and hard-to-clean flux residues. Reduces solder mask and component damage.
<b>BIOACT EC-98</b> Ultrasonic Spray Defluxer	Aqueous ultrasonic and immersion defluxer.
<b>LENIUM ES</b> Vapor Degreasing Solution	Stabilized n-Propyl Bromide (nPB) solution designed to remove flux residues in vapor degreasing equipment. <b>Approved by Lockheed-Martin EMAP, Messier-Dowty, Safran In-1500, UTAS LGPS 1400</b>
<b>HYDREX™ EMC-44</b> Oven & Wave Solder Cleaner	Electronics maintenance cleaning solution designed to remove flux residues, greases and other soils in reflow ovens, wave solder machines and pick-and-place systems.
<b>HYDREX EMC-86</b> Immersion Pallet Cleaner	Electronics maintenance cleaning solution designed to clean wave solder pallets in soak, agitated immersion and ultrasonic cleaning systems.
<b>HYDREX SC-30 RTU</b> Underwipe Cleaner	Ready-To-Use stencil underwipe cleaner. Nitrogen & Phosphorous free. pH Neutral. Low VOCs.

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**COMPLETE SOLUTION.** For more than 35 years, Vantage has supplied MROs, airlines, and manufacturers the most complete range of approved chemical solutions on the market. From aircraft paint removers to manual hand-wipe cleaners to sophisticated parts washing solutions, Vantage's sales and technical professionals are trained to help customers select, evaluate and implement the most appropriate products and processes.

**TRUSTED BRANDS.** Vantage's chemical solutions are engineered to meet and exceed the aerospace and defense industry's requirements for safety, performance and materials compatibility. **AEROWAX™, AXAREL™, B&B™, BIOACT™, CleanSafe™, LENIUM™** and **RE-ENTRY™** are brands trusted and approved by leading manufacturers and repair facilities in over 30 countries worldwide.

**SOLVENT SUBSTITUTION & POLLUTION PREVENTION.** Safety, health and environmental responsibility are cornerstones of both our products and work practices. From reducing VOC emissions to minimizing exposures to lowering fire risk, we have experience helping customers find suitable replacements for **acetone, IPA, MEK, MPK, mineral spirits, trichloroethylene (TCE), perchloroethylene (PERC), methylene chloride (MeCl), HCFCs** and other hazardous solvents. Contact us today to learn how we can address your solvent substitution and pollution prevention initiatives.

## APPLICATIONS & PROCESSES

- Exterior aircraft & component paint removal
- Aircraft exterior wet & dry washing
- Aircraft undercarriage & heavy-duty wet washing
- Aircraft polishing solutions; Abrasive & non-abrasive
- Removing Corrosion Inhibiting Compounds (CICs) & hydraulic fluids from undercarriage, wheel well, bilge areas
- Temporary Protective Coating (TPC) removal
- Metal & composite cleaning and surface preparation
- Adhesive & sealant removal
- General purpose degreasing & component teardown cleaning
- Gas path turbine engine cleaning
- Removing masking wax during selective plating
- Cleaning before & after Nondestructive Testing (NDT)
- Appearance solutions for thrust stains & rubber scuffs
- Immersion, ultrasonic and spray parts washing
- Vapor degreasing of parts & assemblies
- Removing flux residues from Printed Circuit Boards (PCBs)
- Cleaning electrical wiring harnesses & components

## APPROVALS & CUSTOMERS

- Airbus
- American Airlines
- Bell Helicopter
- The Boeing Company
- Bombardier
- CFM International
- Embraer
- Engine Alliance
- Eurocopter
- GE Aviation
- Gulfstream Aerospace
- International Aero Engines
- Honeywell Aerospace
- Lockheed-Martin
- Lufthansa Technik
- Messier-Bugatti-Dowty
- Northrop Grumman
- Orbital ATK
- Pratt & Whitney
- Praxair
- Rolls-Royce
- Safran
- Scott Aviation
- Spirit AeroSystems
- Turbomeca
- United Airlines
- US Department of Defense
- UTAS UTC Aerospace Systems



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