

Samuel Banner & Co Ltd - Aerospace Approved Product Range

Company	Approved Products	Conforming Products
Boeing Company	AXAREL 56, AXAREL 1000, AXAREL 2000, AXAREL 3000, CleanSafe 787, Clean-Safe 787C, M-AERO, M-GP, RE-ENTRY PREPSOLV	BIOACT 105, BIOACT 121, BIOACT 145, BIOACT 280E, LENIUM FHD, LENIUM XS, NOVEC HFE 7100, NOVEC HFE 7200, NOVEC HFE 71DE
Bombardier	AXAREL 9100	
Bell Helicopter	AXAREL 6100, BIOACT 105	
CFM	BIOACT 105, BIOACT 280E	
Douglas Aircraft Co.	M-AERO, M-GP	BIOACT 105, BIOACT 121, BIOACT 145, LENIUM FHD, LENIUM XS, NOVEC HFE 7100, NOVEC HFE 7200, NOVEC HFE 71DE
General Electric	BIOACT 105, BIOACT 280	
Goodrich Actuation Sys.	AXAREL 4100, AXAREL 6100	
Goodrich Landing Gear	LENIUM ES	
GulfStream Aerospace	BIOACT 105, BIOACT 145	
Hawker Pacific Aerospace		AXAREL 56, BIOACT 280
International Aero Engines (IAE)	BIOACT 105, BIOACT 280, BIOACT 280E, CleanSafe 787C	
Honeywell	AXAREL 2200, BIOACT 105	BIOACT 280
Lockheed Martin	AXAREL 9100, LENIUM ES, LENIUM XS	
Messier-Dowty	AXAREL 56, CleanSafe 787C	
Military	AXAREL 1000, AXAREL 2000, AXAREL 3000, AXAREL 4000, M-AERO NS, RE-ENTRY PREPSOLV, RE-ENTRY PLUS 4	AXAREL 9100, CleanSafe 787C
Pratt & Whitney	AXAREL 1000, AXAREL 2000, AXAREL 3000, BIOACT 105, BIOACT 280, BIOACT 280E, CleanSafe 787C, M-AERO	CleanSafe 787C, BIOACT 105, BIOACT 280, BIOACT 280E
Praxair	LENIUM GS	
Rolls-Royce	AXAREL 4100, AXAREL 6100, AXAREL 9100, BIOACT 105, BIOACT 280, BIOACT 280E, CleanSafe 787C, EVOLVE, LENIUM FHD, M-AERO, M-AERO NS, PERKLONE MD, TRIKLONE LE, TRIKLONE N	
Scott Aviation	LENIUM GS	
United Airlines	BIOACT 105	

Product	Application	Approvals / Test Method Conformance
AXAREL® 52 <i>Semi-Aqueous</i>	Immersion Spray	<ul style="list-style-type: none"> • SAE ARP 1755A - Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Test Method • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials
AXAREL® 56 <i>Semi-Aqueous</i>	Immersion Spray	<ul style="list-style-type: none"> • Approved by Boeing as PSD 6-3 for BAC 5200 Cleaning, Preserving & Re-lubricating Anti-friction Bearings, Method II A Pressure Spray Cleaning • Approved by Boeing BAC 5763 Type II Emulsion Cleaning & Aqueous Degreasing (5-25% in Spray; 5-100% in immersion) • Supported by Hawker Pacific Aerospace UK Ltd as a Diphasic Cleaning/Degreasing Chemical • Approved by Messier-Dowty PCS-2620 for use on all materials and coatings on Messier-Dowty parts (Memo LMP 09/031) • ASTM F-519 - Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments
AXAREL® 1000 <i>Solvent</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> • Approved under MIL-PRF-680B Degreasing Solvent Type I Low Flash Point (Military Symbol SD-1) (DS-0020) • Approved by Boeing as PSD 6-88 for BAC 5750 Solvent Cleaning (as optional to P-D-680 specification) • Approved by Pratt & Whitney as PMC 9001-1, -2, -7, -10 Stoddard Solvent (MIL-PRF-680, Type I, II or III) • ASTM D-1296 - Standard Test Method for Odor of Volatile Solvents and Diluents • ASTM D-130 - Standard Test Method for Corrosiveness to Copper from Petroleum Products by Copper Strip Test • ASTM D-1353 - Standard Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials
AXAREL® 2000 <i>Solvent</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> • Approved under MIL-PRF-680B Degreasing Solvent Type II High Flash Point (Military Symbol SD-2) (DS-0018) • Approved by Boeing as PSD 6-88 for BAC 5750 Solvent Cleaning (as optional to P-D-680 specification) • Approved by Pratt & Whitney as PMC 9001-3, -4, -8 Stoddard Solvent (MIL-PRF-680, Type I, II or III) • ASTM D-1353 - Standard Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products • ASTM D-1296 - Standard Test Method for Odor of Volatile Solvents and Diluents • ASTM D-130 - Standard Test Method for Corrosiveness to Copper from Petroleum Products by Copper Strip Test • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials

Product	Application	Approvals / Test Method Conformance
AXAREL® 2200 <i>Solvent</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> • Approved by Honeywell Spec No P8264935 Engineering Bulletin for the MDM Boot of the Enhanced Space Station Multiplexer/Demultiplexer • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials
AXAREL® 3000 <i>Solvent</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> • Approved under MIL-PRF-680B Degreasing Solvent Type III Very High Flash Point (200°F) (Military Symbol SD-3) (DS-0017) • Approved by Boeing as PSD 6-88 for BAC 5750 Solvent Cleaning (as optional to P-D-680 specification) • Approved by Pratt & Whitney as PMC 9001-5, -6, -9 Stoddard Solvent (MIL-PRF-680, Type I, II or III) • ASTM D-1353 - Standard Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products • ASTM D-130 - Standard Test Method for Corrosiveness to Copper from Petroleum Products by Copper Strip Test • ASTM D-1296 - Standard Test Method for Odor of Volatile Solvents and Diluents • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials
AXAREL® 4000 <i>Solvent</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> • Approved under MIL-PRF-680B Degreasing Solvent Type IV High Flash Point with Citrus Odor (Military Symbol SD-4) (DS-0023) • ASTM D-1353 - Standard Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products • ASTM D-130 - Standard Test Method for Corrosiveness to Copper from Petroleum Products by Copper Strip Test • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials
AXAREL® 4100 <i>Solvent Blend</i>	Immersion	<ul style="list-style-type: none"> • Approved by Goodrich Actuation Systems 981-100-020 Issue 4 Solvent Degreasing • Approved by Rolls-Royce CSS No. 255 Type A Non-Halogenated Organic Solvent Cleaner (MLC104) • Approved by Rolls-Royce OMat 1/257M Solvent Cleaner • SAE ARP 1755B - Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Test Method • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials

Product	Application	Approvals / Test Method Conformance
AXAREL® 6100 <i>Solvent Blend</i>	Immersion	<ul style="list-style-type: none"> • Approved by Bell Helicopter, Bulletin No 1915, Solvents, Blended Organic, Cold Degreasing • Approved by Goodrich Actuation Systems 981-100-020 Issue 4 Solvent Degreasing • Approved by Rolls-Royce CSS No. 255 Type A Non-Halogenated Organic Solvent Cleaner (MLC104) • Conforms to Pratt & Whitney Hot Corrosion Testing of Standard Gas Turbine Engine Alloys (AMS 4037, 4375, 6359, 5508, 5536, 5544, 5608) • SAE ARP 1755B - Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Test Method • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials
AXAREL® 9100 <i>Solvent Blend</i>	Immersion	<ul style="list-style-type: none"> • Conforms to Boeing D6-17487 Rev M Exterior & General Cleaners & Liquid Waxes • Approved by Bombardier Service Bulletin S.B. 670BA-34-027 Cleaning Pitot and Static Lines and Fittings, Sec 3.B. (CRJ: CL-600-2C10,-2D24) • Conforms to MIL-PRF-680B Degreasing Solvent Type III Very High Flash Point (200°F) (Military Symbol SD-3) • Approved by Rolls-Royce CSS No. 255 Type A Non-Halogenated Organic Solvent Cleaner (MLC104) • Approved by Rolls-Royce OMat 1/257M Solvent Cleaner • Conforms to Royal Air Force Harrogate Montreal Protocol Alternatives Programme Replacement for Ozone Depleting Substances (1995) • SAE ARP 1755A - Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Test Method • ASTM D-1353 - Standard Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products • ASTM D-1296 - Standard Test Method for Odor of Volatile Solvents and Diluents • ASTM D-130 - Standard Test Method for Corrosiveness to Copper from Petroleum Products by Copper Strip Test • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials

Product	Application	Approvals / Test Method Conformance
BIOACT® 105 <i>Solvent Blend</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> • Approved by Bell Helicopter Bulletin No: 1915 Solvents, Blended Organic, Cold Degreasing (Liquid & Pre-Saturated Wipes) • Conforms to Boeing D6-17487 Rev L Exterior & General Cleaners & Liquid Waxes (exceptions: ASTM F-484 Stress Cracking Tests on Acrylics, Type C) • Approved by CFM PCN No 2007/00123 V1.B, CFM56 Engines • Conforms to Douglas Aircraft Co CSD #1 General Purpose Cleaner (exceptions: ASTM F-484 Stress Cracking Tests on Acrylics, Type C) • Approved by GE for Cleaning Method No 23 Hand-Wipe Degreasing, SPM Task 70-21-23-110-053 (CO4-251) • Approved by GE for as alternate to SPM TASK 70-21-01-110-001 Cleaning Method No 1 Solvent Degreasing • Approved by GE for as alternate to SPM TASK 70-21-22-110-042 Cleaning Method No 22 Light Duty Aqueous Cleaning for Localized Hand-Wipe Cleaning • Approved by Gulfstream Aerospace Standard GAS115H for Solvent Cleaner/Degreaser, Mixed Hydrocarbons • Approved by Honeywell C5049 Cleaning of Titanium & Titanium Alloys • Approved by International Aero Engines (IAE) CoMat 01-506 (Liquid), CoMat 01-506A (Pre-saturated Wipes) • Approved by Pratt & Whitney as PMC 8929 Hand Wiping solvent for POP 1800-U Masking of Parts Prior to Selective Painting, Chemical Processing, Painting or Stripping • Approved by Pratt & Whitney as PMC 8929 Hand Wiping Solvent for SPOP 208 Degreasing of Parts by Solvent Wiping (SPM Rev 120, Part# 585005) • Conforms to Pratt & Whitney PWA 36604 Rev D Hot Corrosion (AMS 4037) • Approved by Rolls-Royce CSS No. 255 Type A Non-Halogenated Organic Solvent Cleaner (MLC104) • Approved by Rolls-Royce OMat 1/257M Solvent Cleaner • Approved by United Airlines Engine Parts Cleaning, Part #: SOL3001-17 for BIOACT 105 Precision Cleaner, SOL3001-17TWL10X12 for Saturated Wipes • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-502 - Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces • ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments • ASTM F-485 - Standard Practice for Effects of Cleaners on Unpainted Aircraft Surfaces • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals • ASTM F-2111 - Standard Test Method for Corrosion of Low-Embrittling Cadmium Plate by Aircraft Maintenance Chemicals

Product	Application	Approvals / Test Method Conformance
BIOACT® 121 <i>Solvent</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> • Conforms to Boeing D6-17487 Rev N Solvent Cleaners, General Cleaning • Conforms to Boeing BAC 5750 Solvent Cleaning Sec. 5.11: d-Limonene, 95% minimum • Conforms to Boeing D6-17487 Rev L Exterior and General Cleaners and Liquid Waxes • Conforms to Douglas Aircraft Company CSD #1 Type 1 Materials & Procedures for General Exterior Cleaning of Painted & Un-painted Surfaces • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-502 - Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces • ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials • ASTM F-485 - Standard Practice for Effects of Cleaners on Unpainted Aircraft Surfaces • ASTM F-484 - Standard Test Method for Stress Cracking of Acrylic Plastics in Contact with Liquid or Semi-Liquid Compounds • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals
BIOACT® 145 <i>Solvent Blend</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> • Conforms to Boeing D6-17487 Rev. L Exterior & General Cleaners & Liquid Waxes • Conforms to Douglas Aircraft Company CSD #1 General Purpose Cleaner • Approved by GulfStream Aerospace Standard GAS115H for Solvent Cleaner/Degreaser, Mixed Hydrocarbons, Part# GAS115H1 • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-502 - Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces • ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments • ASTM F-485 - Standard Practice for Effects of Cleaners on Unpainted Aircraft Surfaces • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals

Product	Application	Approvals / Test Method Conformance
BIOACT® 280 <i>Semi-Aqueous</i>	Immersion	<ul style="list-style-type: none"> • Approved by GEAE as a general parts cleaner and as a plating wax remover on GEAE and CFMI engine hardware. • Conforms to Honeywell EMS 53170 Rev C 10-21-97 Type 1 Material Requirements for Aqueous Cleaning and Semi-Aqueous Degreasing, Tests A,B,C,F,G • Supported by Hawker Pacific Aerospace, UK as a General Purpose High Temperature Degreasing Agent • Approved by International Aero Engines (IAE) CoMat 01-460 • Approved by Pratt & Whitney MCL E-205 Titanium Stress Corrosion Test • Approved by Pratt & Whitney as PMC 8913-1,-2 Wax Removal Solvent for SPOP 37 Method 2 Removal of Plating Wax (SPM Rev 120, Part #585005) • Approved by Pratt & Whitney as PMC 8913-1,-2 Wax Removal Solvent for POP 1800-U Masking of Parts Prior to Selective Painting, Chemical Processing, Painting or Stripping • Approved by Rolls-Royce CSS No 254 Class A Semi-Aqueous Cleaning Fluids Suitable for Use on Metallic Materials as CM0000044 - Class A: BIOACT 280 (MLC104) • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-2111 - Standard Test Method for Corrosion of Low-Embrittling Cadmium Plate by Aircraft Maintenance Chemicals • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials • ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments
BIOACT® 280E <i>Semi-Aqueous</i>	Immersion	<ul style="list-style-type: none"> • Conforms to Boeing D6-17487 Rev N Exterior and General Cleaners and Liquid Waxes, Polishes and Polishing Compounds (exceptions: ASTM F-484 Stress Cracking Tests on Acrylics, Type C • Approved by CFM PCN No 2007/00123 V1.B, CFM56 Engines • Approved by International Aero Engines (IAE) CoMat 01-460 • Conforms to Pratt & Whitney PWA 36604 Rev B Hot Corrosion Testing of Standard Gas Turbine Engine Alloys (AMS 5544/5536/5608/5508/6359/4037/4375) • Approved by Pratt & Whitney as PMC 8913-11,-12 Wax Removal Solvent for SPOP 37 Method 2 Removal of Plating Wax (SPM Rev 120, Part #585005) • Approved by Pratt & Whitney as PMC 8913-11,-12 Wax Removal Solvent for POP 1800-U Masking of Parts Prior to Selective Painting, Chemical Processing, Painting or Stripping • Approved by Rolls-Royce OMat 1/288D Wax Remover • SAE ARP 1755B - Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Test Method • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials • ASTM F-502 - Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces • ASTM F-519-93 - Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-2111 - Standard Test Method for Corrosion of Low-Embrittling Cadmium Plate by Aircraft Maintenance Chemicals

Product	Application	Approvals / Test Method Conformance
CleanSafe™ 787 <i>Aqueous</i>	Immersion Spray	<ul style="list-style-type: none"> Approved by Boeing as PSD 6-52 for BAC 5763 Type II Grade A Emulsion Cleaning & Aqueous Degreasing
CleanSafe™ 787C <i>Aqueous</i>	Immersion Spray	<ul style="list-style-type: none"> Approved by Boeing as PSD 6-52 for BAC 5763 Type II Grade A Emulsion Cleaning & Aqueous Degreasing Conforms to GE Appendix F Recommended Practice for Certifying Agent Approval of Cleaning Products Used on Metallic Jet Engine Hardware (Sec. 3.1.1, -.4, -5, -6, --9, -10, -12) Approved by International Aero Engines (IAE) CoMat 01-565 Approved by Messier-Dowty PCS-2621 for use on all materials and coatings on Messier-Dowty parts (Memo LMP 09/031) Conforms to MIL-PRF-87937D Cleaning Compound, Aerospace Equipment Type IV – Heavy Duty, Water-Dilutable Cleaning Compound Approved by Pratt & Whitney as SPMC 190 referenced by SPS 190 Immersion Cleaning for SPOP 209 Degreasing of Parts by Aqueous Cleaning Approved by Pratt & Whitney as PMC 1465 referenced by PS 437 Alkali Cleaner (Immersion) for POP 1800-U Masking of Parts Prior to Selective Painting, Chemical Processing, Painting or Stripping Approved by Pratt & Whitney as PMC 1465 referenced by PS 437 Alkali Cleaner (Immersion) for POP 573-AD Alkali Cleaning (Immersion) Approved by Pratt & Whitney as PMC 1465 referenced by PS 436 Alkali Cleaner (Spray Wash) for POP 581-R Alkali Cleaning in Cabinet-Type Automatic Spray Wash Equipment Conforms to Pratt & Whitney PWA 36604 Revision D Approved by Rolls-Royce OMat 1/24AL Aqueous Cleaner Approved by the SCAQMD as a Clean Air Solvent Wet Adhesion Tape Test MIL-DTL-83488d - Detail specification coating, aluminium, high purity (APR 1999) SAE ARP 1755B - Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Test Method ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals ASTM D-816 - Standard Test Methods for Rubber Cements ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials ASTM F-1111 - Standard Test Method for Corrosion of Low-Embrittling Cadmium Plate by Aircraft Maintenance Chemicals ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test ASTM F-502 - Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces

Product	Application	Approvals / Test Method Conformance
EVOLVE CH10 <i>Solvent</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> Approved UK Defence Research Agency for Cold Cleaning in Defence Sector Approved by British Aerospace for Cleaning during manufacture and maintenance of satellite components and aircraft Approved by British Airways for Cold cleaning aircraft maintenance Approved by McDonnell Douglas (now Boeing) for cleaning of aircraft wings during manufacture and overhaul Approved by Australian MOD for cold cleaning in the defence sector Approved by UK MOD as replacement for 1,1,1, Trichloroethane Approved by Rolls-Royce for General cold cleaning during manufacture
EVOLVE CH15 <i>Solvent</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> Approved UK Defence Research Agency for Cold Cleaning in Defence Sector Approved by British Aerospace for Cleaning during manufacture and maintenance of satellite components and aircraft Approved by UK MOD as replacement for 1,1,1, Trichloroethane Approved by Rolls-Royce for General cold cleaning during manufacture
LENIUM® ES <i>n-PB based</i>	Vapour Degreasing	<ul style="list-style-type: none"> Approved by Goodrich Landing LGPS 1400 Solvent Cleaning/Degreasing Approved by Lockheed Martin EMAP G41.149
LENIUM® GS <i>n-PB based</i>	Vapour Degreasing	<ul style="list-style-type: none"> Approved by Praxair ID# GDE 10055434 Approved by Scott Aviation SMP No.: 7700009 Rev AP, Cleaning of Components & Assemblies For Use in Breathing Equipment ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials
LENIUM® XS <i>n-PB based</i>	Vapour Degreasing	<ul style="list-style-type: none"> Conforms to Boeing D6-17487 Rev P Solvent Cleaners/General Cleaning Conforms to Douglas CSD #1 Type 1 General Purpose Cleaner (exceptions: Stress Cracking Test on Acrylics) Approved by Lockheed Martin EMAP G41.149 SAE ARP 1755B - Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Test Method ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test ASTM F-502 - Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials ASTM F-485 - Standard Practice for Effects of Cleaners on Unpainted Aircraft Surfaces ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals

Product	Application	Approvals / Test Method Conformance
LENIUM® FHD <i>HFC based</i>	Vapour Degreasing	<ul style="list-style-type: none"> • Conforms to Boeing D6-17487 Rev P Solvent Cleaners/General Cleaning • Conforms to Douglas CSD #1 Type 1 General Purpose Cleaner (exceptions: Stress Cracking Test on Acrylics) • Approved by Rolls-Royce OMat 1/21E Vapor Degreasing • SAE ARP 1755B - Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Test Method • ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-502 - Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces • ASTM F-945 - Standard Test Method for Stress-Corrosion of Titanium Alloys by Aircraft Engine Cleaning Materials • ASTM F-485 - Standard Practice for Effects of Cleaners on Unpainted Aircraft Surfaces • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals
M-AERO <i>Aqueous</i>	Immersion Spray	<ul style="list-style-type: none"> • Approved by Boeing BAC 5763 as Emulsion Cleaning & Aqueous Degreasing, Type II • Approved by Boeing BAC 5749 for Alkaline Cleaning • Approved by Boeing PS 12024 for Cleaning, Aqueous Degreasing • Approved by Boeing D6-17487 as Exterior & General Cleaners & Liquid Waxes • Approved by Douglas CSD #1 Type 1 as General Purpose Cleaner • Approved by Pratt & Whitney PWA 36604 as Cleaners used in the manufacture and overhaul of Parts • Approved by Rolls-Royce CSS 200 Control Procedures for the Purchase & Supply of Consumable Material used during Manufacture • Approved by Rolls-Royce CSS 204 Aqueous Cleaners
M-AERO NS <i>Aqueous</i>	Immersion Spray	<ul style="list-style-type: none"> • Approved as MIL-PFF-87937C Cleaning Compound, Aerospace Equipment, Type II, Water Dilutable Cleaning Compound, Type IV, Heavy Duty Water Dilutable Cleaning Compound. • Approved by Rolls-Royce CSS 200 Control Procedures for the Purchase & Supply of Consumable Material used during Manufacture • Approved by Rolls-Royce CSS 204 Aqueous Cleaners
M-GP <i>Aqueous</i>	Immersion Spray	<ul style="list-style-type: none"> • Approved by Boeing D6-17487 as Exterior & General Cleaners & Liquid Waxes • Approved by Douglas CSD #1 Type 1 as General Purpose Cleaner

Product	Application	Approvals / Test Method Conformance
NOVEC HFE-7100 <i>HFE based</i>	Vapour Degreasing	<ul style="list-style-type: none"> • Conforms to Boeing D6-17487 Exterior & General Cleaners & Liquid Waxes Specification • Conforms to Boeing BAC 5402 Oxygen Systems Cleaning • Conforms to Douglas CSD #1 Type 1 as General Purpose Cleaner • Approved by US Military (CID) as A-A-59150 for LOX Gauge Cleaning • Conforms to AMS 1526B Cleaning for Aircraft Exterior Surfaces Water-Miscible, Pressure-Spraying Type” Specification • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-484 - Standard Test Method for Stress Cracking of Acrylic Plastics in Contact with Liquid or Semi-Liquid Compounds • ASTM F-502 - Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces • ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments • ASTM F-485 - Standard Practice for Effects of Cleaners on Unpainted Aircraft Surfaces • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals • ASTM F-1111 - Standard Test Method for Corrosion of Low-Embrittling Cadmium Plate by Aircraft Maintenance Chemicals • ASTM D-56 - Flash Point
NOVEC HFE-71DE <i>HFE based</i>	Vapour Degreasing	<ul style="list-style-type: none"> • Conforms to Boeing D6-17487 Exterior & General Cleaners & Liquid Waxes Specification • Conforms to Boeing BAC 5402 Oxygen Systems Cleaning • Conforms to Douglas CSD #1 Type 1 as General Purpose Cleaner • Approved by US Military (CID) as A-A-59150 for LOX Gauge Cleaning • Conforms to AMS 1526B Cleaning for Aircraft Exterior Surfaces Water-Miscible, Pressure-Spraying Type” Specification • ASTM F-502 - Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces • ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments • ASTM F-485 - Standard Practice for Effects of Cleaners on Unpainted Aircraft Surfaces • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals • ASTM F-1111 - Standard Test Method for Corrosion of Low-Embrittling Cadmium Plate by Aircraft Maintenance Chemicals

Product	Application	Approvals / Test Method Conformance
NOVEC HFE-7200 <i>HFE based</i>	Vapour Degreasing	<ul style="list-style-type: none"> • Conforms to Boeing D6-17487 Exterior & General Cleaners & Liquid Waxes Specification • Conforms to Douglas CSD #1 Type 1 as General Purpose Cleaner • Conforms to AMS 1526B Cleaning for Aircraft Exterior Surfaces Water-Miscible, Pressure-Spraying Type” Specification • ASTM F-1110 - Standard Test Method for Sandwich Corrosion Test • ASTM F-484 - Standard Test Method for Stress Cracking of Acrylic Plastics in Contact with Liquid or Semi-Liquid Compounds • ASTM F-502 - Standard Test Method for Effects of Cleaning and Chemical Maintenance Materials on Painted Aircraft Surfaces • ASTM F-519 Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments • ASTM F-485 - Standard Practice for Effects of Cleaners on Unpainted Aircraft Surfaces • ASTM F-483 - Standard Practice for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals • ASTM F-1111 - Standard Test Method for Corrosion of Low-Embrittling Cadmium Plate by Aircraft Maintenance Chemicals • ASTM D-56 - Flash Point
PERKLONE MD <i>PCE based</i>	Vapour Degreasing	<ul style="list-style-type: none"> • Approved by Rolls-Royce for Cleaning & Degreasing • ASTM 4376 - Standard Specification for Vapor-Degreasing grade Perchloroethylene
RE-ENTRY® PLUS 4 <i>Solvent Blend</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> • Approved by the Department of the Navy WS 26145c Terpene Blend Solvent, Ultra Low Residue for Use in Cleaning & Degreasing Operations for Solid Rocket Motor Components • ASTM D-1353 - Standard Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products
RE-ENTRY® PREPSOLV® <i>Solvent</i>	Manual Cleaning Immersion	<ul style="list-style-type: none"> • Approved by Boeing BAC 5000 General Sealing, Rev W, 17-JAN-2000 (as Glidsafe Prepsolv by Glidco: former manufacturer) • Approved by Boeing BAC 5750 Solvent Cleaning, Sec 5.1s (as Glidsafe Prepsolv by Glidco: former manufacturer) • Approved by the Department of the Navy WS 26024d Terpene Solvent, Ultra Low Residue for Use in Cleaning & Degreasing the Trident II D/5 First & Second Stage Motors • ASTM D-1353 - Standard Test Method for Nonvolatile Matter in Volatile Solvents for Use in Paint, Varnish, Lacquer, and Related Products

Product	Application	Approvals / Test Method Conformance
TRIKLONE LE <i>TCE based</i>	Vapour Degreasing	<ul style="list-style-type: none"> • Approved by Rolls-Royce in MLC104 under CSS 51 for RPS128 Cleaning & Degreasing • Approved as MIL-T-27602 Trichloroethylene, Oxygen Propellant Compatible • Approved as O-T-643C Trichloroethylene, Technical • Approved by Boeing BAC 5408 PSD 6-11 Vapor Degreasing • ASTM D-4080 - Standard Specification for Trichloroethylene, Technical and Vapor-Degreasing Grade
TRIKLONE N <i>TCE based</i>	Vapour Degreasing	<ul style="list-style-type: none"> • Approved by Rolls-Royce in MLC104 under CSS 52 for RPS128 Cleaning & Degreasing • Approved as MIL-T-27602 Trichloroethylene, Oxygen Propellant Compatible • Approved as O-T-643C Trichloroethylene, Technical • Approved by Boeing BAC 5408 PSD 6-11 Vapor Degreasing • Approved as BS580:1963 Type II • ASTM D-4080 - Standard Specification for Trichloroethylene, Technical and Vapor-Degreasing Grade