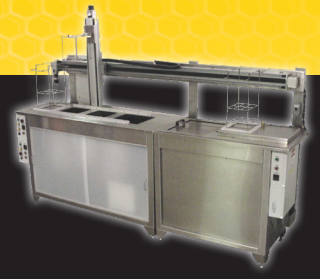
AquaVantage®
3843 GD



High Performance, Phosphate-Free Immersion & Ultrasonic Detergent

Space & Aerospace




APE/NPE/VOC-free, non-phosphated aqueous-based solution research-developed to remove straight oils, particularly higher weight/viscosity blends that are difficult to remove. Typically used in immersion, highly turbulated or ultrasonic cleaning processes, AquaVantage 3843 GD is also low-foaming in spray wash applications. A mildly alkaline solution which cavitates in ultrasonics with unparalleled performance providing a water-break-free surface. Safe on virtually all metals.

Benefits

- **Independent Performance Documentation** – Proven Cleaning Results
- **Water-Based, Dilutable Formulation** – Dilutes specific to your application
- **Extends Bath Life** – Creates Labor Savings & Reduces Costs
- **In-Process Corrosion Control**
- **Low Foaming at Temperatures Greater than 120˚F (49˚C)**
- **Free Rinsing** – Cleaner Parts & Simplified Cleaning
- **Reduced Cleaning Rework & Rejects**
- **Separates oil effectively for easy skimming**
- **RoHS Compliant**, **APE/NPE/VOC-Free**

Industry Approvals & Conformance

- **Boeing:** BAC 5749
- **Boeing:** BAC5763
- **Lockheed Martin:** STM32-301 Type I Class 2A (low temp, liquid, immersion)

Test Compliance

- **ARP 1755B Cat 10**
- **ASTM F519-17a Hydrogen Embrittlement**
- **ASTM F945**
- **ASTM F483:** Total Immersion Corrosion
- **ASTM F1110:** Sandwich Corrosion
- **ASTM B117:** Corrosion
- **ASTM F2111:** Intergranular Attack
- **Etch Rate**
- **Adhesion:** Shear strength of structural adhesive specimens

Phosphoric Acid Anodized Aluminum Specimens* -65°F - 5 specimen average = 2,753 lb_f-in

180°F - 5 specimen average = 3,903 lb_f-in

TANK MAINTENANCE

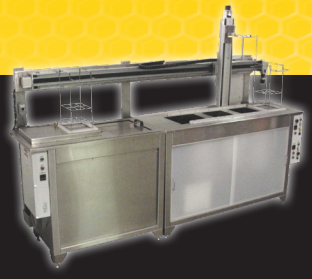
Proper maintenance of your immersion/ultrasonic tank will ensure the longest possible detergent bath life, the best parts cleaning performance and the optimal assurance against part corrosion.

BHC has developed Maintenance Guidelines for Aqueous Detergent Tanks, a comprehensive flow chart to illustrate the process and a step-by-step video to guide you through.

Concentration Verification for AquaVantage 3843 GD

Brulin Titration Kit (Prod. No. XTRKIT)	
Sample Size:	10 mL
Titrant:	1.0 N HCl Solution
Indicator:	Bromophenol Blue (3 Drops)
Concentration %:	Drops Titrant x 0.68

Burette Test Method	
Sample Size:	50 mL
Titrant:	0.2 N HCl Solution
pH Endpoint:	3.80
Concentration %:	mL Titrant x 0.71



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Performance Properties

Substrates

AquaVantage 3843 GD is non-corrosive and non-staining to a wide variety of alloys. Some selected categories of materials compatible with AquaVantage 3843 GD include*:

Ferrous Metals: Carbon Steel • Stainless Steel • Steel

Non-Ferrous Metals & Alloys: Aluminum • Brass • Cadmium Plating • Chrome Plating • Copper (Alloys & Plating) • Hastelloy • Inconel • Magnesium & Magnesium Alloys • Monel • Ni-Cad Plating • Nickel, Nickel Alloys & Plating • Tin • Titanium & Titanium Alloys • Zinc & Galvanized

Plastic & Composites: Acrylics • High Density Polyethylene/HDPE • Nitrile Butadiene Rubber • Polyvinyl Chloride/PVC

Soils

AquaVantage 3843 GD removes a wide range of organic and inorganic soils. Some categories of soils that can be removed with AquaVantage 3843 GD include*:

Buffing Compounds • Coolants • Dirt (Particulate) • Fat • Flux • Food Soils • Grease • Inks • Oil (General, Cutting, Drawing Compounds, Fingerprints, Forming, Honey, Hydrocarbon, Lubricants, Self Emulsifying, Silicone/Greases, Sulfur/Chlorinated, Water Soluble)

**Material compatibility should always be confirmed via testing with specific contaminants under specific cleaning conditions.*

Use Recommendations

System	Immersion Spray Wash (Batch or Continuous)
Dilution	Immersion: 3-20%, typically used at 5% to 10% Spray Wash: 5-10%, typically used at 7% LOX/Breathable Oxygen: 7% to 12% Metal Finishing/MRO: 7% to 25% Minimum recommended concentration for cleaning aluminum is 5.0%
Temperature	120-180°F (49-82°C); typically used at 140-150°F (60-66°C)
Cleaning Duration	1-30 minutes: typical parts are cleaned in 1-5 minutes
Rinse Temperature	A heated rinse may improve overall performance. Some OEM process specifications may require a heated rinse.
Rinse Water Quality	Recommended conductivity of final rinse water: • Ultra-Clean Applications: ≤ 50 microsiemens • Precision Cleaning: ≤ 500 microsiemens • Gross Cleaning: > 500 microsiemens
To avoid spotting, it is best if the parts remain wet between processing stages.	

Authorized Representative:

Typical Chemical Characteristics

Physical Form	Liquid
Color	Straw Yellow
Fragrance	Mild Detergent
Viscosity	Water-thin
Weight	8.77 lbs/gal (1.0506 g/ml)
pH of Concentrate	11.7
pH of Working Solution	11.1 @ 10% v/v
Flash Point (PMCC)	None to boiling
Foaming Tendency	Low
Calculated V.O.C	0% (0 g/L)
Freeze/Thaw	Reusable after thawing & remixing

Shipping: Non-hazardous for shipping by ground, sea, or air in all package sizes.

Storage: Store in well-ventilated areas at temperatures between 40-110°F (4-43°C). The recommended shelf life of this product is 24 months.

Disposal: Dispose of waste and residues in accordance with local authority requirements. Please recycle container.

Prevention: Wash hands thoroughly after handling. Wear protective gloves. Wear safety glasses with side shields (or goggles).

Product Number: 431045

Availability:
- 5 Gal (19L)
- 55 Gal (208L)
- 275 Gal Tote (1,041L)
- Bulk - up to 5,000 Gal (~19,000L)

BHC offers a full line of Brulin-branded industrial chemicals for industries such as Space & Aerospace, Automotive, Precision Metal, Medical and Optics.

BHC

317.923.3211
WWW.BHCINC.COM
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