



# AquaVantage® 3843 GD

High Performance, Phosphate-Free Immersion & Ultrasonic Detergent

## PRODUCT BENEFITS AND PROPERTIES

AquaVantage 3843 GD is a 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

- RoHS Compliant
- Extends Bath Life – Reduces Costs
- In-Process Corrosion Control
- Transmits Ultrasonic Cavitation at All Temperatures – Significantly Improved Soil Removal
- Low Foaming at Temperatures Greater than 120°F (49°C)
- Free Rinsing – Permits Improved Adhesion
- Reduced Cleaning Rework & Rejects
- Separates Oil Effectively for Improved Oil Removal

## INDUSTRY APPROVALS & CONFORMANCE

- **Boeing:** BAC 5749
- **Boeing:** BAC 5763
- **Lockheed Martin:** STM32-301 Type I Class 2 (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 lbf-in  
180°F - 5 specimen average = 3,903 lbf-in**

## TANK MAINTENANCE

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

Brulin 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

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

## MATERIAL COMPATIBILITY

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: <ul style="list-style-type: none"><li>• Ultra-Clean Applications: &lt; 50 microsiemens</li><li>• Precision Cleaning: &lt; 500 microsiemens</li><li>• Gross Cleaning: &gt; 500 microsiemens</li></ul>
To avoid spotting, it is best if the parts remain wet between processing stages.	

## 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
Flash Point (PMCC)	None to boiling
Foaming Tendency	Low

## SHIPPING, STORAGE, DISPOSAL & PREVENTION

Please refer to the Safety Data Sheet for shipping, storage, disposal and prevention guidance.

## AVAILABILITY

- 5 Gal (19L)
- 55 Gal (208L)
- 275 Gal Tote (1,041L)

**Product #: 431045**