



AquaVantage® 1990 GD

The Cleaning Standard In Spray Wash Detergents

PRODUCT BENEFITS AND PROPERTIES

AquaVantage 1990 GD is an aqueous degreasing chemistry developed for soil removal during the manufacturing or rebuilding of precision components in inline or cabinet type spray wash cleaning processes. It has been designed for global regulatory acceptance. 1990 GD is a mildly alkaline solution with excellent particulate removal abilities. It provides unparalleled cleaning performance while providing a water-break-free or higher level surface cleanliness. Safe on virtually all metals. AquaVantage 1990 GD is non-corrosive and will not stain metals.

Benefits

- No REACH SVHC
- RoHS Compliant
- Extends Bath Life – Reduces Costs
- In-Process Corrosion Control
- Free Rinsing – Permits Improved Adhesion
- Reduced Cleaning Rework & Rejects
- Separates Oil Effectively for Improved Oil Removal
- Low Foaming at Temperatures Greater Than 120°F (49°C)

INDUSTRY APPROVALS & CONFORMANCE

- **Airbus:** AIPI 09-01-003 Approved Alkaline Cleaner
- **Airbus UK:** ABP 8-1290; Approved Alkaline Cleaner
- **Boeing:** BAC 5763; Emulsion Cleaning
- **Boeing:** HP 9-25; Degreasing
- **General Dynamics, Electric Boat Division:** Contract No. N0024-95-C-2103
- **GE Aviation:** S-421
- **GE Aviation:** List of Alloy Compatible Cleaners
- **GM:** FID Number - 330546
- Meggitt Aircraft Braking Systems - Fulfills Standard Practices Manual AP-842 (32-46-35) when used and maintained according to BHC guidance.
- **UTC Aerospace Systems (Rohr):** ML21345; Cleaning Aluminum and Steel Brake/Wheel Parts
- **UTC Aerospace Systems (Hamilton Sundstrand):** Soak Cleaning of Heat Exchangers
- **Honeywell (Allied Signal):** EMS 53170; Steel Brake/Wheel Parts
- **Honeywell:** Standard Practices Manual
- **Lockheed Martin:** EPS G32.0160
- **Lockheed Martin:** LMA-PG006, Rev B
- **Lucas Aerospace:** DC Starter/Gen
- **National Aeronautics and Space Administration:** Procedures for Cleaning of Systems and Equipment for Oxygen Service
- **National Stock Number:** 05 Size; 6850-01-428-8842
- **National Stock Number:** 55 Size; 6850-01-435-6459
- **Philips Electronics:** 12NC Number: 1322-529-81201
- **Rolls-Royce:** CSS204 Class A
- **Rolls-Royce:** OMAT 1/24 AG
- **Safran Aero Engines:** DMP 13-300
- **SAFRAN:** PR-1500
- **Teledyne Ryan Aeronautical:** RACO 2833, Alkaline Degreasing Fluid, Spray
- **United Airlines:** UMS CLE3005-3-2-Cleaner, High Temp/High Press. A/C Parts Washer

TEST COMPLIANCE

- **ARP 1755A:** Stock Loss (Cat. 9)
- **ARP 1755B:** Stock Loss (Cat.10)
- **ASTM F-483:** Total Immersion Corrosion
- **ASTM F-484:** Stress Cracking of Acrylic Plastics
- **ASTM F-485:** Unpainted Aircraft Surfaces
- **ASTM F-502:** Painted Aircraft Surfaces
- **ASTM F-519:** Hydrogen Embrittlement (Type 1c)
- **ASTM F-945:** Titanium Stress Corrosion (AMS 4916 & 4911 Alloys)
- **ASTM F-1110:** Sandwich Corrosion
- **ASTM F-1111:** Low-Embrittling Cadmium Plate
- **Boeing:** D6-17487 Rev. K; Exterior Cleaner
- **Boeing (McDonnell Douglas):** CSD 1; General Purpose Cleaner
- **Contains No Cyanides or Sulfides**
- **GE Aviation:** CT-882; Solvent Replacement
- **Sandwich Corrosion Test**

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.

Bruhin 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

Bruhin Titration Kit
(Prod. No. XTRKIT)

Sample Size: 20 mL
Titrant: 1.0 N HCl Solution
Indicator: Bromophenol Blue (4 Drops)
Concentration %: Drops Titrant x 0.34

Burette Test Method

Sample Size: 25 mL
Titrant: 0.1 N HCl Solution
Indicator: 3.80
Concentration %: mL Titrant x 0.80

or

Sample Size: 25 mL
Titrant: 0.1 N HCl Solution
pH Endpoint: 4.50
Concentration %: mL Titrant x 0.86

MATERIAL COMPATIBILITY

AquaVantage 1990 GD is non-corrosive and non-staining to a wide variety of alloys. Some selected categories of materials compatible with AquaVantage 1990 GD include*:

Ferrous Metals: Carbon Steel • Stainless Steel • Steel

Non-Ferrous Metals & Alloys: Aluminum • Cadmium Plating • Chrome Plating • Copper (Alloys & Plating) • Magnesium & Magnesium Alloys • Nickel, Nickel Alloys & Plating • Titanium & Titanium Alloys

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

Other: Painted Surfaces

SOILS

AquaVantage 1990 GD removes a wide range of organic and inorganic soils. Some categories of soils that can be removed with AquaVantage 1990 GD include*:

Buffing Compounds • Coolants • Dirt (Particulate) • Fat • Grease • Oil (General, Cutting, Drawing Compounds, Forming, Hydrocarbon, Lubricants, Self Emulsifying, Water Soluble)

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

USE RECOMMENDATIONS

System	Spray Wash Systems (Batch or Continuous)
Dilution	3-15%, typically used at 5% Minimum recommended concentration for cleaning aluminum is 5.0%
Cleaning Temperature Range	120-170°F (49-77°C); typically used at 130-150°F (54-66°C)
Cleaning Duration	1-30 minutes: typical parts are clean in 3-10 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.	

TYPICAL CHEMICAL CHARACTERISTICS

Physical Form	Liquid
Color	Slight Yellow
Odor/Fragrance	Mild
Viscosity	Water-thin
Weight	8.88 lbs/gal (1.06 g/ml)
pH of Concentrate	11.3
pH of Working Solution:	10.5
Flash Point (PMCC)	None to boiling
Foaming Tendency	Low
Calculated V.O.C.	0% (0 g/l)
Freeze/Thaw	Reusable after thawing & remixing

SHIPPING, STORAGE, DISPOSAL & PREVENTION

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 18 months.

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

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

AVAILABILITY

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

Product #: 301008