

# TECHNICAL DATA SUMMARY

# AeroTron<sup>®</sup>-AV

**NON-FLAMMABLE  
PRECISION CLEANING &  
VAPOR DEGREASING SOLVENT**

## Outstanding Performance, Excellent Health & Safety Profile, Simple Change Over

AeroTron-AV is the next generation **non-flammable** solvent specifically engineered to **replace TCE and n Propyl Bromide**. AeroTron is designed for the most demanding of vapor degreasing, ultrasonic, cold immersion and hand wipe cleaning applications. AeroTron has a very favorable health and safety profile, performs or **outperforms TCE and n Propyl Bromide**, is economical and is **simple to switch over** if using most NESHAP compliant vapor degreasing equipment. Further advantages in bath life, mild odor, and stability in the presence of water and AeroTron's excellent regulatory profile make the use of AeroTron-AV a better choice than conventional non-flammable solvents.

## ADVANTAGE CHECKLIST



### IMPROVED HEALTH & SAFETY PROFILE

- All components of AeroTron-AV are **US-EPA SNAP** Program Approved
- **Excellent Health and Safety Profile**—No cancer or reproductive toxicity impacts
- **Excellent Workplace Recommendation** —**150ppm (8 hr. TWA)** based on OSHA PEL and US EPA recommendations for product components



### OUTSTANDING PERFORMANCE

- **Non-Flammable**; specifically engineered for Precision Vapor Degreasing/Cleaning
- **Distillable / Recyclable**
- Highly effective at **removing hydrocarbon contaminants** from metal parts
- Broadly compatible with metals and many plastics
- Excellent for use in conjunction with ultrasonic cleaning for removal of inorganic materials —metal fines, abrasives and fabricating debris and dirt
- **Highly stable** in the presence of water / **Mild Odor**



### REDUCED REGULATORY REQUIREMENTS

- US EPA SNAP Program Approved
- Effective Replacement for TCE, n Propyl Bromide (nPB), MCL, & PERC
- Easy to Ship—Not Regulated by DOT for Transportation
- Reduced Reporting—Not NESHAP Regulated
- Non-Hazardous—Not Regulated under SARA, CERCLA or RCRA as hazardous for disposal



### ECONOMICAL FOR USE

Favorable price, recyclability, simple disposal and standard carrier shipping make AeroTron-AV an economical alternative for your cleaning application.



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# AeroTron®-AV

## IDEAL FOR PRECISION CLEANING APPLICATIONS

- **High Solvency Power** on a wide variety of industrial contaminants: Oils, Greases, Silicone Fluxes, Lubricants, Coolant Residues, Waxes, Fingerprints, Adhesives, Polar/Non-polar Contaminants and Surface Particles.
- **Quick & Full Evaporation** leaving no AeroTron residue on the surface.
- **Low Surface Tension** to penetrate complex part surfaces, small diameter blind holes, threads and spaces where one part lays upon another.



### ► DESIGNED FOR ULTRASONIC CLEANING & VAPOR DEGREASING



Performance Properties	AeroTron-AV
Boiling Point	116° F / 47° C
Flash Point, by ASTM D93 & D56	None
Evaporation Rate	Quickly and Completely
Azeotropic Composition for Vapor Degreasing	Yes
Broad Metal Compatibility	Yes
Hydrolysis	Highly Stable
Distillable	Yes
Kauri Butanol Value	97
Non-Volatile Residue	< 10 ppm
Water Content, max.	50 ppm
Odor	Mild Ether

Technical Physical Properties	AeroTron-AV
Specific Gravity, 25°C, g/cm <sup>3</sup>	1.28
Specific Heat, 25°C, cal/g	0.26
Latent Heat, cal/g	67
Viscosity, 25°C, cps	0.48
Vapor Pressure, atm	0.53
Vapor Density (Air =1)	5.2
Water Solubility (g/100 ml)	0.15
Surface Tension (dyn/cm)	19.5
Flammability Limits, LEL/UEL	7% - 14.0%

Environmental, Regulatory & Health Profile	AeroTron-AV
US-EPA SNAP Program	Approved for Solvent Cleaning
Global Warming Potential (GWP)	All components deemed acceptable by US-EPA SNAP Program— No phase out pending
Ozone Depletion Potential (ODP)	0
Volatile Organic Compound (VOC)	>75%
NESHAP—Halogenated Solvent Cleaning Regulations	Not Regulated
Transportation	Not regulated for transport in 1, 5, 30 & 55 gallon containers
IARC Cancer Classification	None – Not Listed
Manufacturer's Overall Workplace Exposure Guideline	150 ppm—8 hour TWA; 300 ppm—15 minute ceiling (see SDS for further details)

**GETTING STARTED WITH AEROTRON-AV IS EASY!** With these Performance Validation Options:

**1. Complimentary Test Cleaning of Sample Parts By Vapor Degreasing** Reliance has a complete test cleaning lab outfitted with our **ULTRA Vapor Degreasing Systems** which include ultrasonic immersion, vapor rinse, spray, automated basket handling, rotation and multi-dip cleaning process capabilities. We will clean your sample parts in our Part Cleaning Lab in the AeroTron-AV solvent and return your sample parts to you for your performance evaluation along with an **AeroTron-AV Part Cleaning Report** and a reference **video** of the cleaning.

**2. Complimentary Sample of AeroTron-AV**  
Reliance is pleased to provide you with a sample of AeroTron-AV for comparative testing at your facility.

**3. Vapor Degreaser Rentals** Reliance has an extensive inventory of Reliance Vapor Degreasing Systems for rent to assist with validation testing of the AeroTron-AV solvent at your facility.

**4. Come to Reliance and Visit** Together, we can clean your parts in an **ULTRA Vapor Degreaser** filled with **AeroTron-AV** and discuss your application, assess process steps, determine optimal processing time frames and validate the advantages and performance of AeroTron-AV in person.



*Reliance manufactures a comprehensive vapor degreasing offering: The ULTRA state-of-the-art vapor degreaser system and AeroTron Solvents.*

Made in the USA by:

**Reliance**

Specialty Products, Inc.

## **AEROTRON-AV TECHNICAL SUPPORT ADVANTAGE: RELIANCE VAPOR DEGREASING EXPERTS KNOW VAPOR DEGREASING EQUIPMENT, SOLVENT AND PROCESS OPTIMIZATION.**

Reliance is a long established manufacturer of precision cleaning solvents and the ULTRA vapor degreasing cleaning systems (including automation) that serves the aerospace, electronics, optics, metal fabricating and metal finishing industries. We take a very interactive, practical and hands-on approach to working with our customers.



***We invite you to utilize our expertise and experience to support your success.***

- **Container Sizes:** AeroTron-AV is available in 1, 5, 20, 30 and 55 gallon drums.
- **Shipping:** AeroTron-AV is NOT hazardous for shipment by the DOT. AeroTron can be shipped by LTL ground common carrier, or by UPS, FedEx Standard or Overnight. AeroTron-AV is considered as Class 70 for DOT shipping.
- **Availability:** AeroTron-AV is manufactured by Reliance in Illinois and is a stock item in all sizes. Orders received by 11:00 CST typically ship the same day.



**GIVE US A CALL AT: 847.640.8923**

## METAL COMPATIBILITY TESTING

METHODS MIL-T-81533A 4.4.9 and TM0193-2000

METAL	AeroTron-AV Compatible	METAL	AeroTron-AV Compatible	METAL	AeroTron-AV Compatible
Aluminum 1050	Yes	Mild Steel	Yes	Nickel	Yes
Al -Bronze 614	Yes	Carbon Steel	Yes	Titanium 5-2.5	Yes
Copper	Yes	Stainless 303	Yes	Zinc	Yes
Naval Brass 464	Yes	Stainless 316	Yes	Silver Solder B AG8	Yes
Tin – Bronze 903	Yes	Stainless 330	Yes	Silver	Yes
Tin	Yes	Tungsten Carbide	Yes	Gold	Yes
Hastalloy –B	Yes	5 Sn/ 95Pb	Yes	Lead	Yes
Inconel 600	Yes	70 Sn/30Pb	Yes	Magnesium	Yes

## SUMMARY OF AEROSPACE TESTING DATA

### HOT CORROSION TESTING

PWA 36603 Appendix A

ALLOY	Temperature	Test Result
AMS 5544 (Waspaloy)	1600° F	Conforms
AMS 5536 (Hastalloy X)	1600° F	Conforms
AMS 5608 (Haynes 188)	1600° F	Conforms
AMS 5508 (Greek Ascology)	1050 °F	Conforms
AMS 6359 (4340 Steel)	750° F	Conforms
AMS 4037 (2024-T3 Aluminum)	600° F	Conforms
AMS 4375 (Magnesium)	600° F	Conforms

### STRESS CORROSION TESTING

ASTM F-945 (Method A):

METAL	Outcome	Test Result
AMS 4911 Titanium	No Evidence of Cracking	Conforms
AMS 4916 Titanium	No Evidence of Cracking	Conforms

### ARP1755 STOCK LOSS TESTING - Effect of Cleaning Agents on Aircraft Engine

UNCOATED PANELS	Test Result
AMS 4037 Aluminum	Conforms
AMS 4640 Aluminum Bronze	Conforms
AMS 5582 Colbalt	Conforms
AMS 5537 Colbalt	Conforms
AMS 4507 Copper	Conforms
IMI - 685	Conforms
AMS 4375 Magnesium	Conforms
AMS 4424 (AZ 92) Magnesium	Conforms
AMS 4442 Magnesium	Conforms
Mar-M -002	Conforms
AMS 5536 Nickel	Conforms
AMS 5544 Nickel	Conforms
AMS 5596 Nickel	Conforms
AMS 5661 Nickel	Conforms
AMS 5040 Steel	Conforms
AMS 5504 Steel - Corrosion Resistant	Conforms
AMS 5508 Steel - Corrosion Resistant	Conforms
AMS 5524 Steel - Corrosion Resistant	Conforms
AMS 5525 Steel - Corrosion Resistant	Conforms
AMS 6431 Steel	Conforms
AMS 4911 Titanium	Conforms

ELECTROPLATED PANELS	Test Result
AMS 4037/AMS 2437 Anodic Treatment	Conforms
AMS 5504/AMS 2400 Cadmium Plating	Conforms
AMS 5504/AMS 2406 Chromium Plating	Conforms
AMS 5504/AMS 2410 Silver Plating	Conforms
AMS 5504/AMS 2416 Ni-Cad Plating	Conforms
AMS 5504 / AMS 2418 Copper Plating	Conforms
AMS 5504/AMS 2424 Nickel Plating	Conforms

PLASMA COATED PANELS	Test Result
AMS 4911/AMS 2437-3	Conforms
AMS 5504 /AMS 2437-2	Conforms
AMS 5504/AMS 2437-3	Conforms
AMS 5504/AMS 2437-5	Conforms
AMS 5504/ AMS 2437-6	Conforms
AMS 5504/ AMS 2437-7	Conforms