Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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Chemtronics®

Technical Data Sheet

Electro-Wash® Tri-V
Precision Cleaner

PRODUCT DESCRIPTION

Electro-Wash® Tri-V Precision Cleaner is a nonflammable cleaner that quickly removes flux, grease, oils, dirt, dust, and other contaminants from electronic components and assemblies. This solvent system is engineered to remove all types of oil and grease while evaporating quickly and leaving no residues. Tri-V nPB replacement chemistry is a novel new chemistry that does not contain any n-propyl bromide, TCE, any hazardous air pollutants or ozone depleting compounds.

- Powerful cleaning agent to remove flux, oils, dirt, grease, dust, and other contaminants, one cleaner for electronics cleaning
- Nonflammable, can be used on energized equipment
- Penetrates to clean hard to reach areas
- Evaporates quickly and leaves no residues, minimizes down time
- Does not contain n-propyl bromide, trichloroethylene, or perchloroethylene
- Stabilized for metals such as aluminum, magnesium, titanium, and brass
- Noncorrosive, safe for sensitive metals

TYPICAL APPLICATIONS

Electro-Wash® Tri-V Cleaner Degreaser removes flux, dirt, grease, oxidation and other soils from:

- Printed Circuit Boards
- Relays and switches
- Transformers
- Electro-Mechanical Devices
- Electric Motors and Generators
- Electronic Controllers
- Circuit breakers

TYPICAL PRODUCT DATA AND PHYSICAL PROPERTIES

Boiling Point	118° F (48° C)
Evaporation Rate (butyl acetate=1)	>1
Flash Point (TCC)	None
Specific Gravity	
Liquid	1.27
Aerosol	1.22
Vapor Pressure @68°F	
Liquid	267 mmHg
Aerosol	175mmHG
Appearance	Clear, colorless liquid
Odor	Mild
Solubility in Water	Negligible
Dielectric Breakdown (ASTM D-877)	
Liquid	23.7 kV
Aerosol	8.0 kV
Kauri-Butanol (KB) Number	100
Shelflife	Aerosol - 5 years from DOM
	Liquids - 2 years after opening

VOC* Content:	Liquid	Aerosol
CARB	100%	73%
SCAQMD	1201 g/L	854g/L
Federal	95%	70%

*Volatile Organic Compound (VOC) information is calculated on a weight basis using the VOC definition of California Air Resources Board (CARB) Consumer Product Regulations, South Coast Air Quality Management District (SCAQMD) Rule 102 and the Federal definition published in 40 CFR 51.100(s).

COMPATIBILITY

Electro-Wash® Tri-V Cleaner Degreaser is generally compatible with most materials used in printed circuit board fabrication, except acrylics, ABS resins, polycarbonates and polystyrenes. As with any cleaning agent solvent/component compatibility must be determined on a non-critical area prior to use.

Material	Compatibility
ABS	Non-Compatible
Buna-N	Fair
EPDM	Fair
Graphite	Excellent
HDPE	Excellent
LDPE	Good
Lexan™	Fair
Neoprene	Fair
Noryl®	Poor
Nylon™ 66	Excellent
Cross-Linked PE	Excellent
Polypropylene	Excellent
Polystyrene	Non-Compatible
PVC	Excellent
Silicone Rubber	Poor
Teflon™	Excellent
Viton™	Fair

Performance	
Soil Removal – Vapor Degreasing	
Lubrizol Corrosion Inhibitor	100% Removal
Unilube All Purpose Grease	80.5% Removal
5W30 Synthetic Oil	100% Removal
Fire Resistant Hydraulic Fluid	100% Removal
Chain Lubricant	100% Removal
Silicone Fluid	100% Removal
Soil Removal – Ultrasonic Cleaning	
Lubrizol Corrosion Inhibitor	100% Removal
Unilube All Purpose Grease	100% Removal
5W30 Synthetic Oil	100% Removal
Fire Resistant Hydraulic Fluid	100% Removal
Chain Lubericant	100% Removal
Silicone Fluid	100% Removal

USAGE INSTRUCTIONS

For commercial use only.
Read MSDS carefully prior to use.
For vapor degreasing or ultrasonic cleaning application, charge sump tank with solvent. For ultrasonic or soak applications, be sure to cover tank when not in use to prevent evaporation. For aerosol applications, spray 4 to 6 inches from surface to clean. Wash parts from top to bottom, allowing the liquid to flush away dirt and dissolved soils. For precise application use attached extension tube.

As with all vapor degreaser equipment and processes, observe all safety precautions, guidelines and operating rules associated with these units. Failure to do so may put operations personnel at risk. Avoid excessive vapor losses, loss of refrigeration, excessive boil sump heat, etc. Make sure all equipment is operated in accordance with the manufacturer's guidelines and instructions. If in doubt, contact your manufacturer immediately.

AVAILABILITY

VVV1614	12 oz Aerosol
VVV114	1 gallon Liquid
VVV514	5 gallon Liquid
VVV5514	53 gallon Liquid

TECHNICAL & APPLICATION ASSISTANCE

Chemtronics provides a technical hotline to answer your technical and application related questions. The toll free number is: **1-800-TECH-401.**

NOTE:

This information is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. CHEMTRONICS does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.

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KENNESAW, GA 30152
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DISTRIBUTED BY:

PHYSICAL PROPERTIES

	Electro-Wash® Tri-V VVV114 - 1 gal VVV514 - 5 gal VVV5514 - 53 gal	n-Propyl Bromide (nPB)	Trichloroethylene (TCE)	Perchloroethylene (Perc)	Methylene Chloride
Flash Point	None	None	None	None	None
KB Valu	100	125	129	90	136
Dielectric Strength (kV)	23.7	24	30	45.7	24
Surface Tension (dynes/cm)	22	24	29	32	27
Evaporation Rate (n-butyl acetate =1)	>1	0.28	4.45	1.5	7
Boiling Point	118°F / 48°C	158°F / 70°C	189°F / 87°C	250°F / 121°C	104°F / 40°C
Specific Gravity @ 20°C	1.27	1.35	1.46	1.62	1.31
Vapor Pressure (mm Hg) @ 20°C	267	111	58	14	355
Heat of Vaporization (cal/g)	68	59	57.2	50.1	78.7

ENVIROMENTAL & HEALTH REGULATORY

Ozone Depleting Potential (ODP)	0	0.016-0.019	0	0	0
Global Warming Potential (GWP)	Low	0.31	140	Negligible	8.7
Volatile Organic Compounds (VOC)	Yes	Yes	Yes	Exempt	Exempt
SNAP Approved	Yes	Yes	Yes	Yes	Yes
Hazardous Air Pollutant (HAP)	No	Proposed	Yes	Yes	Yes
Prop 65 Chemical	No	Yes	Yes	Yes	Yes
Carcinogen (or suspected)	No	Yes	Yes	Suspected	Suspected
Threshold Limit Value (ppm) (TLV)	200	10	25	25	25

MATERIAL COMPATIBILITY

++ = Exellent   + = Good   O = Fair   - = Poor   - - = Not Compatible

ABS	-	O	-		
Buna-N	O	+	-		
EPDM	O	-	- -		
Graphite	++	++	++		
HDPE	++	++	O		
LDPE	++	O	-		
Lexan	-	-	-		
Neoprene	O	O	-		
Noryl	-	+	-		
Nylon 66	+	++	O		
Cross-Linked PE	+	++			
Polypropylene	++	+	O		
Polystyrene	-	- -	- -		
PVC	+	+	-		
Silicone Rubber	O	- -	-		
Teflon	++	++	++		
Viton	+	++	++		