Chemtronics®

TDS # VVV1695

Technical Data Sheet

Flux-Off® Tri-V™

Flux Remover

PRODUCT DESCRIPTION

Flux-Off Tri-V Flux Remover is an extra strength nonflammable solvent that removes heavy and encrusted flux deposits. This high pressure solvent system is engineered to remove all types of flux types while evaporating quickly and leaving no residues. Tri-V replacement chemistry is a novel new chemistry that does not contain any n-propyl bromide, TCE or any ozone depleting compounds.

- Powerful cleaning agent to remove R, RA, RMA, and synthetic fluxes
- Removes encrusted fluxes and white residues
- 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

Flux-Off Tri-V Flux Remover effectively cleans flux from:

- Chip Carriers
- Heat Sinks
- Metal Housings and Chassis
- Printed Circuit Boards
- Plugs
- Relays and Contacts
- Sockets
- Surface Mount Device Pads
- Switches

TYPICAL PRODUCT DATA AND PHYSICAL PROPERTIES

Boiling Point	118° F (48° C)
Evaporation Rate (butyl acetate=1)	>1
Flash Point (TCC)	None
Specific Gravity	1.27
Vapor Pressure @68°F	267 mmHg
Appearance	Clear, colorless liquid
Odor	Mild
Solubility in Water	Negligible
Kauri-Butanol (KB) Number	100
Shelflife	Liquids - 2 years after opening
VOC* Content:	
CARB	100%
SCAQMD	1201 g/L
Federal	95%

* 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).

NOTE: 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.

COMPATIBILITY

Flux-Off® Tri-V™ Flux Remover 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 – Ultrasonic Cleaning	
Kester 959 Low Residue No-Clean Flux	100% Removal
W/W Gum Rosin	99.8% Removal
Soil Removal - Vapor Degreasing	
Kester 959 Low Residue No-Clean Flux	100% Removal
W/W Gum Rosin	99.8% Removal
Soil Removal – Hand Wiping	
Kester 959 Low Residue No-Clean Flux	100% Removal
W/W Gum Rosin	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. Allow the soiled article to soak for 5 - 10 minutes, then remove and loosen any remaining soils with a Controlwipes™ Wipe.
For wipe applications, wet a Controlwipes Wipe with Flux-Off Tri-V and wipe away soils.
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 grease. For precise application use attached extension tube.

AVAILABILITY

VVV195	1 gallon Liquid
VVV595	5 gallon Liquid
VVV5595	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.

CHEMTRONICS
8125 COBB CENTER DRIVE
KENNESAW, GA 30152
1-770-424-4888 REV. B (05/16)

DISTRIBUTED BY:

PHYSICAL PROPERTIES	Flux-Off® Tri-V VVV195 - 1 gal VVV595 - 5 gal VVV5595 - 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	+	++	++		