# Flux-Off® Tri-V™ Flux Remover

**Product# VVV595, VVV5595**

## Product Description

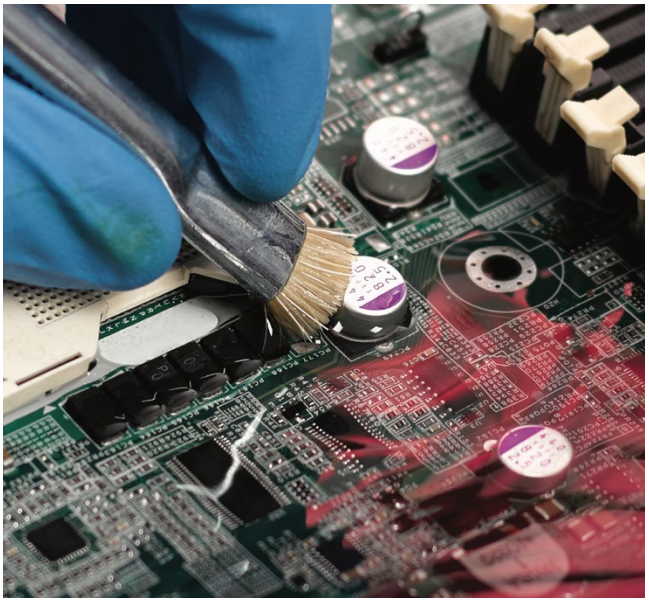
Flux-Off Tri-V Flux Remover is an extra strength nonflammable solvent that removes heavy and encrusted flux deposits. This high pressure solvent system is engineered to remove all types of flux types while evaporating quickly and leaving no residues. Tri-V replacement chemistry is a novel new chemistry 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 (Initial) |
| **Solubility in Water:** | Negligible |
| **Specific Gravity:** | 1.27 |
| **Vapor Pressure @68ºF** | 267 mm Hg |
| **Appearance** | Clear, colorless liquid |
| **Odor** | Mild |
| **Flash Point (TCC):** | None |
| **Evaporation Rate:** (butyl acetate =1) | >1 |
| **VOC* Content:** | |
| CARB | 100% |
| SCAQMD | 1201g/L |
| Federal | 95% |
| **Kauri-Butanol (KB) Number** | 100 |
| **Shelflife** | 2 years after opening |
| **RoHS Compliant** | Yes |

* 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.*

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## 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 |
| PPSU | Excellent |
| 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 industrial use only. Read SDS 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

| | |
|---|---|
| **VVV595** | 5 gal. / 18.9 L Liquid |
| **VVV5595** | 53 Gal. / 200 L Liquid |

## Technical and 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.

| PHYSICAL PROPERTIES | Flux-Off® Tri-V<br>VVV195 - 1 gal<br>VVV595 - 5 gal<br>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 | + | ++ | ++ | | |

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