

# Flux Removal Guide

## Introduction

A wide variety of commercially available cleaning agents are available that have the capability to clean EFD flux residue. In addition, a variety of techniques are used for flux residue removal and most are combinations of cleaning agent, agitation, and heat.

Cleaning methodology is, of course, critical to a cleaning agent's effectiveness. Follow the supplier's recommendations. Also, follow EFD reflow guidelines in order to avoid damaging the residues, making them more difficult to remove.

## Water Soluble Flux Residues

Water soluble flux residues are just that – soluble in water. Unless damaged by excessive heating or exposure to other chemicals, such as rosin fluxes, they are removable with warm water and agitation.

Surfactants and detergent agents may be added to improve the speed and effectiveness of water cleaning processes. EFD recommends that you work with your cleaning agent supplier to identify the optimal solution for your cleaning process.

## Rosin-based Flux Residues

Not all rosin-based flux residues are created equal. No-clean residues are more difficult to remove than RMA and RA residues, often requiring different cleaning agents.

Several different approaches to the cleaning of rosin-based residues exist. These include aqueous, semi-aqueous, and solvent systems. Aqueous and semi-aqueous systems use saponifiers to break the rosin down into water-soluble materials. Solvent systems dissolve the rosin directly. EFD recommends that you work with your cleaning agent supplier to identify the optimal solution for your cleaning process.

## Equipment Settings

Typical machine settings for automatic cleaning systems are 37°C to 60°C and 20psi to 40psi. Certain component types, such as BGA (ball grid array) and CSP (chip scale package) may require more specialized equipment and different process settings.

## Solvent Suppliers

EFD does not manufacture or supply solvents for use in flux residue removal. However, there are a number of companies that specialize in cleaning technology, and EFD recognizes these companies as the experts in residue removal.

Each of the cleaning agent suppliers listed here have successfully used their products to clean flux residues produced by one or more EFD products.

EFD has not performed evaluations on products provided by these suppliers and, therefore, cannot confirm any findings. EFD furthermore does not endorse any specific solvent or manufacturer.

Product listings change on a periodic basis. We recommend that you call them to see what they can do to help with your application.

JNJ Industries 800-554-9994

Kyzen 800-845-5524

Petroferm 904-261-8286

Tech Spray 800-858-4043

Zestron 888-999-9116

## Technical Support

Our Product Specialists and Technical Service Team are available to evaluate your residue removal problems. If you have a problem removing residue from your product and have not had successful support from your solvent supplier, call our Technical Service Team at 800-338-4353.