



Vantage™ BIOACT™ EC-98 Ultrasonic Defluxer Case Study

Customer	Electronic manufacturing services (EMS) company
Customer's Product	High-reliability printed circuit board assemblies (PCBAs)
Product Info	PCBAs are used in flight control electronics, navigation systems, and mechanical control components for the aerospace and defense markets.
Manufacturing Process	PCBs are assembled using water-soluble solder paste.
Current Cleaning Process	Following reflow, PCBs are cleaned in an ultrasonic bath using an aqueous saponifier. After flux removal, PCBs are water-rinsed in a heated immersion tank and rinsed in an in-line spray washer using deionized (DI) water as a final rinse.

Problem OEM and end-users experienced electrical short circuits as a result of incomplete removal of flux residues. Consequently, PCBs were returned for rework, impacting profitability and threatening the viability of the contract with the OEM. It was also observed that the saponifier caused foam levels in the baths to rise.

Solution Vantage's solution was to replace the saponifier with **Vantage™ BIOACT™ EC-98 Ultrasonic Defluxer** in the current ultrasonic cleaning bath.

BIOACT EC-98 is a proprietary electronics cleaner and defluxer formulated to remove flux residues and other contaminants such as fingerprints and oils.

Results The use of BIOACT EC-98 removed all flux residues from the PCBs and eliminated the issue with electrical shorts and subsequent PCB rework. The EMS company was also able to eliminate the final DI water rinse step in the in-line spray washer. Lastly, BIOACT EC-98 mitigated the issue with foaming attributed to the saponifier.

Other Features

- Optimized to cavitate in ultrasonic cleaning equipment
- Removes no-clean, water-soluble, and RMA flux residues
- Effectively removes baked-on flux residues
- Excellent water rinsibility and eliminates white residues

Vantage Performance Materials

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BIOACT EC-98
effectively removed
all flux residues
from the PCBs
and eliminated
the foam in the
ultrasonic bath.