

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003  
DateRun: 09/19/2003  
Experimenters: Jason Marshall  
ClientType: Lab  
ProjectNumber: Project #1  
Substrates: Aluminum  
PartType: Coupon  
Contaminants: Fluxes  
Cleaning Methods: Immersion/Soak  
Analytical Methods: Gravimetric

Purpose: Laboratory evaluations of alternative cleaning products

Experimental Procedure: Basic cleaning performance testing was conducted using ASTM G122 as the bases for cleaning. Five products were used at full strength, heated to 120 F on a hot plate. Fifteen preweighed coupons were coated with Kester Solder Flux 1544 (64-17-5, 78-92-2, 8050-09-7) and allowed to dry for two hours and reweighed. Three coupons were cleaned in each solution for 5 minutes using stir-bar-agitation, rinsed in a tap water bath for 15 seconds at 120 F and dried using air blow off for 30 seconds at 68 F. Coupons were allowed to dry overnight and then reweighed a final time. Efficiencies were calculated.  
Note: Bio T Foam Plus was sprayed onto coupons at room temperature and allowed to sit for 5 minutes. The cleaner was then rinsed.

Results: Two products removed over 85% of the flux. Two others removed over 80% and the final product removed just over 70%. Many of the products could be improved with higher pressure drying to remove cleaner residue from the coupons.

Summary:

<b>Substrates:</b>	Aluminum				
<b>Contaminants:</b>	Fluxes				
<b>Company Name:</b>	<b>Product Name:</b>	<b>Conc.:</b>	<b>Efficiency:</b>	<b>Effective:</b>	<b>Observations:</b>
AW Chesterton	278 Super Solv	100	83.01	<input type="checkbox"/>	
Bio Chem Systems	Bio T Foam Plus	100	73.74	<input type="checkbox"/>	
Invista S.a.r.l	Flexisolv DBE Ester	100	88.20	<input checked="" type="checkbox"/>	
Invista S.a.r.l	Flexisolv DBE 3 ester	100	86.68	<input checked="" type="checkbox"/>	
Gemtek Products	SC EZ Solv Safety Solvent	100	83.68	<input type="checkbox"/>	

Conclusion: Two products, both dibasic esters, were effective in removing the flux from the coupons within five minutes.