

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2003
DateRun: 09/22/2003
Experimenters: Jason Marshall
ClientType: Lab
ProjectNumber: Project #1
Substrates: Steel
PartType: Coupon
Contaminants: Inks
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 Cerdec Magenta (119-64-2, 65997-18-4, 1345-24-0, 20667-12-3) and allowed to dry for three days 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 off.

Results: No cleaners removed over 85% of the ink. No cleaners removed over 50% of the ink.

Summary:

Substrates:	Steel					
Contaminants:	Inks					
Company Name:		Product Name:	Conc.:	Efficiency:	Effective:	Observations:
AW Chesterton		278 Super Solv	100	3.11	<input type="checkbox"/>	
Bio Chem Systems		Bio T Foam Plus	100	0.12	<input type="checkbox"/>	
Invista S.a.r.l		Flexisolv DBE 3 ester	100	1.16	<input type="checkbox"/>	
Eastern Color and Chemical Company		Ecobrite Cleaner AK	100	34.29	<input type="checkbox"/>	
Gemtek Products		SC EZ Solv Safety Solvent	100	44.91	<input type="checkbox"/>	

Conclusion: The addition of mechanical energy, either ultrasonics or manual wiping would improve efficiencies.