

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2004
 DateRun: 05/03/2004
 Experimenters: Jason Marshall
 ClientType: Textile Mfr
 ProjectNumber: Project #1
 Substrates: Steel
 PartType: Coupon
 Contaminants: Buffing/Polishing Compounds
 Cleaning Methods: Immersion/Soak
 Analytical Methods: Gravimetric

Purpose: To identify an alternative to Kerosene for cleaning knitting equipment.

Experimental Procedure: Seven products were selected based on client request for products that can be used to clean-in-place at room temperatures. Each product was used at full strength in a 250 ml beaker. Twenty-one preweighed steel copper coupons were coated with the buffing material, Henkel Loctite Clover Silicone Carbide Grease Mix grit size (64742-52-5, 1592-21-2, 1333-86-4), using a hand held swab. Coupons were weighed a second time to determine the amount of soil added to each coupon. Three coupons were cleaned in each solution for 5 minutes using stir-bar agitation. After cleaning parts were dried using air-blow off. Coupons were then weighed a final time and efficiencies were calculated.

Results: Three products removed over 80% of the soil after five minutes of soaking. A few of the products were noted to have a residual cleaning fluid film remaining on the coupons after the air blow off. These products, Soy Gold 2000, 278 Super Solv and United 2002 Harvest Gold, were blotted dry in an attempt to remove the cleaning product but leave the uncleaned soil behind. The table below lists the amount of soil added, the amount remaining after cleaning and the efficiency for each coupon cleaned.

Cleaner	Coupon 1	Coupon 2	Coupon 3	Average
Soy Gold 2000	51.37	42.69	81.66	58.57
278 Super Solv	12.24	95.82	68.50	58.85
Custom Clean NCC 2778	82.84	86.25	79.42	82.83
Solsafe 245	94.04	96.13	79.21	89.79
DS 108	72.97	84.26	72.28	76.51
D Greeze 500 LO	82.03	90.84	94.71	89.19
United 2002 Harvest Gold	58.41	61.01	51.58	57.00

Summary:

Substrates:	Steel				
Contaminants:	Buffing/Polishing Compounds				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:
AG Environmental Products	Soy Gold 2000	100	58.57	<input type="checkbox"/>	66.02 wipe
AW Chesterton	278 Super Solv	100	58.85	<input type="checkbox"/>	72.16 wipe
BetzDearborne Laboratories Inc	Custom Clean N CC 2278	100	82.83	<input checked="" type="checkbox"/>	
Bio Chem Systems	Solsafe 245	100	89.79	<input checked="" type="checkbox"/>	
Dysol	DS 108 Wipe Solvent	100	76.51	<input type="checkbox"/>	
Transene Company, Inc.	D Greeze 500 LO	100	89.19	<input checked="" type="checkbox"/>	
United Laboratories International	United 2002 Harvest Gold	100	57.00	<input type="checkbox"/>	73.26 wipe

Conclusion: All seven cleaners will be evaluated at removing the buffing compound in a manual application.