CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 36

DateRun: 01/16/2025

Experimenters: Alexander Symko

ClientType: Manufacturing

ProjectNumber: Project #1

Substrates: Laminate

PartType: Coupon

Contaminants: Adhesive

Cleaning Methods:

Analytical Methods: Colorimeter

Purpose: Evaluate the efficacy of HSP solvent blends at removing two different adhesive formulations

Experimental Procedure: 18 coupons were cut from the laminate sheet provided by Conklin office furniture. Colorimeter readings were then recorded prior to soiling. 9 of the coupons were soiled with the wilsonart 3000 adhesive and allowed to air dry overnight. The other 9 coupons were soiled with Jowat 2886.0 hot-melt adhesive and were similarly allowed to dry overnight. After soiled colorimeter readings were taken, the coupons were then manually wiped for 30 seconds each with a microfiber towel that was soaked in one of the three HSP formulations, 1- 48 wt% propylene carbonate and 52 wt% dimethyl glutarate, 2- 37 wt% propylene carbonate and 63 wt% acetone, 3- 48 wt% propylene carbonate and 52 wt% dimethyl carbonate. After wiping, the coupons were allowed to air dry overnight before final colorimeter readings were taken.

Results:

			Initial				Dirty		
Cleaner	ID	Soil	L*	a*	b*	G	L*	a*	b
1	1	Wilsonart	40.57	5.11	7.83	3.60	37.11	6.21	8
	2		39.98	5.02	7.64	3.40	36.73	6.16	8
	3		41.12	5.41	8.02	3.40	38.82	7.22	9
2	4		29.66	4.58	7.82	3.60	37.24	6.62	7
	5		41.01	5.76	8.68	3.40	37.42	5.72	8
	6		40.92	5.08	7.57	3.60	37.78	6.70	8
3	7		40.50	4.67	7.28	4.10	36.90	5.95	7
	8		40.71	4.95	7.81	3.40	36.08	6.06	7
	9		39.69	4.45	7.34	3.60	37.28	5.61	7
1	10	Jowat	41.30	5.10	8.09	3.70	49.78	2.34	2
	11		39.77	4.65	7.93	3.60	49.45	2.17	2
	12		53.22	1.54	3.38	3.20	43.80	3.82	4
2	13		39.41	5.28	7.27	3.60	46.13	2.49	3
	14		44.73	4.20	6.38	3.70	45.71	3.09	3
	15		40.58	5.36	7.71	3.20	47.89	2.47	2
3	16		41.02	5.44	8.93	3.70	47.32	2.72	4
	17		40.67	5.16	7.26	4.70	42.71	2.80	3
	18		40.67	5.00	7.19	3.80	41.28	4.84	7

Summary:

Conclusion: Based on the results of this test, the solvent formulations were moderately to minimally effective at removing the "stain" (soil) and restoring the substrate to its initial state. Stain removal index (SRI) scores above 50 would indicate significant effectiveness in this case, and the highest SRI was for formulation 2 removing the Jowat adhesive with a SRI of 15.34.