CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2024
DateRun:	03/27/2024
Experimenters:	Amelia Wagner
ClientType:	Manufacturing
ProjectNumber:	Project #1
Substrates:	Laminate
PartType:	Coupon
Contaminants:	Adhesive
Cleaning Methods:	Manual Wipe
Analytical Methods:	Gravimetric, Timing
Purpose:	To evaluate the ears of removal of adhesive using a variety of scrubbing tools
Experimental Procedure:	Five scrubbing tools were tested compared to paper towels as a reference. A total of eighteen laminate coupons were used, three per tool. The initial weights of the coupons were recorded. The coupons were then soiled with Roberts Vinyl Composition Floor Adhesive by heating the adhesive with a heat gun for 5 seconds, and then scraping the melted adhesive onto the center of the coupons. The dirty weights of the coupons were then recorded. Each coupon was cleaned with the correct scrubbing tool with Krud Kutter until all of the adhesive was removed. Each coupon received 2 sprays of the Krud Kutter and each tool received 2 sprays of the Krud Kutter, meaning that for each coupon about 3 ml of the cleaning agent was used. The time it took for all of the adhesive to be removed was recorded.

Results:

Tool	Wt of cont.	Time cleaned (secs)	Time required per gram of cont.	AVG Time (secs)	AVG Time
Microfiber Towel	0.5921	80	145	165	2:45
	0.4912	68	154		
	0.5309	88	196		
Cleaning Solutions Soft Touch Scouring Pad	0.4691	27	57	60	1:00
	0.4965	34	68		
	0.8067	46	56		
Hannaford Non Scratch Scrubber Sponges	0.8876	54	61	72	1:12
	1.5201	83	55		
	1.0127	100	99		
Dawn Heavy Duty Scouring Pads	0.9254	127	149	162	2:42
	0.8309	79	178		
	0.5419	54	160		
Scrub Daddy	0.8668	43	50	51	0:51
	1.3215	67	51		
	0.2598	51	52		
Paper Towel (reference)	0.6589	96	163	164	2:44
	0.9408	134	157		
	0.8246	124	171		

Non of the scrubbing tools caused any scratching or destruction of the substrate. The Dawn Heavy Duty Scouring Pads left green residue from the sponge. The microfiber towel is too absorbent, it absorbed too much of the cleaner for it work effectively.

Summary:

Conclusion: The scrub daddy sponges were able to remove all of the adhesive the quickest out of the tools, with an average of a 51 second cleaning time per gram of soil. The Dawn Heavy Duty Scouring Pads are not effective due to the residue left behind.