

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2023

DateRun: 11/15/2023

Experimenters: Amelia Wagner

ClientType: Department of Public Works

ProjectNumber: Project #2

Substrates: Stainless Steel

PartType: Coupon

Contaminants: Asphalt

Cleaning Methods: Immersion/Soak

Analytical Methods: Gravimetric

Purpose: To compare the effectiveness of two current cleaners to an identified alternative cleaner for removing asphalt and tar on road-maintenance tools and work truck beds.

Experimental Procedure: Three pre-weighed stainless steel coupons were assigned to each cleaner. A tablespoon of EZ Street Premium Cold Asphalt was placed on each coupon before sandwiching the contaminated coupon between two steel plates. A mid-size compact car (curb weight: 3,186lbs-3,559lbs) rolled over the steel plates five times in a forward motion to compress the asphalt to the coupons which released the oil and grease to allow the gravel to adhere to the substrate. Dirty weights of the coupons were recorded before testing the cleaners using unheated immersion for 20 minutes with a stir bar set to 200rpm. Once removed, each coupon was wiped with a paper towel to remove the dissolved soil and assess efficacy visually before taking final weights.

Cleaner	Initial weight (g) of contaminate	Final weight (g) of contaminate	% Contamination Removed	% Average
Big Orange-E	2.0443	0.0032	99.84	99.14
	0.0967	0.0011	98.86	
	0.9272	0.0120	98.71	
Solve-It	3.8234	0.0131	99.66	98.56
	0.5860	0.0210	96.42	
	4.9101	0.0195	99.60	
Kinza Thunderbolt	0.5988	0.0016	99.73	99.08
	0.1808	0.0041	97.73	
	0.7436	0.0016	99.78	
Pave Pro Green	0.3672	0.0095	97.41	90.29
	0.0893	0.0160	82.08	
	0.1528	0.0132	91.36	
Pave Pro Gold	0.1363	0.0248	81.80	85.59
	0.1010	0.0187	81.49	
	0.2962	0.0193	93.48	

Pave Pro products will be retested to see if outliers can be removed.

Summary:

Conclusion: Kinza Thunderbolt was as effective as the two current products currently being utilized by the client.