

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2023

DateRun: 08/28/2023

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 find an effective cleaner to remove asphalt staining, oil, grease, and adhered gravel from stainless steel coupons.

Experimental Procedure: Two were chosen for testing; 1. Soycclear 1500 100%, and 2. DS-108 Wipe Solvent 100%. Three stainless steel coupons were assigned to each cleaner for a total of six coupons. Initial weights of the coupons were recorded. About a tablespoon of EZ Street Premium Cold Asphalt was placed on each coupon. The coupons were then placed between two steel plates. A car was driven over the steel plates five times in order to compress the asphalt to the coupons, releasing the oil and grease and causing gravel to become adhered to the coupons. The dirty weights of the coupons were then recorded. The coupons were then subjected to unheated immersion within their corresponding cleaner for 20 minutes with a stir bar set to 200rpm. Once removed, each coupon was wiped once with a paper towel to remove the dissolved soil. Clean weights of the coupons were then recorded.

Results:

Cleaner	Initial wt of cont.	Final wt of cont.	%Cont Removed	% AVG
Soycclear 1500 100%	2.0855	0.0028	99.87	99.43
	1.4404	0.0041	99.72	
	0.3229	0.0042	98.70	
DS-108 Wipe Solvent 100%	0.5635	0.0005	99.91	99.74
	0.7907	0.0048	99.39	
	0.6991	0.0005	99.93	

Summary:

Conclusion: Soycclear 1500 100% and DS 108 Wipe Solvent 100% are effective cleaners in removing asphalt from stainless steel. They passed both gravimetric testing parameters and visual requirements. Future testing will include a reduction of time and a reduction in product concentration.