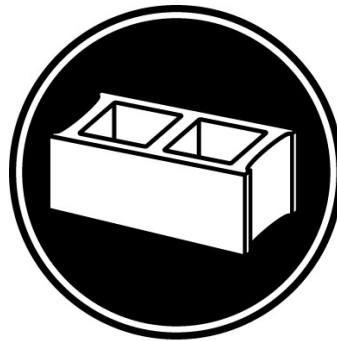




*Pallet Tag Program
Laboratory Report*

KMEW USA Inc.
Redmond, WA



Project No. 1808-20 PTP

Prepared For:



Prepared By:

J. Lucas Comadoll

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QC/Project Testing Technician
AMT Laboratories

August 2018



LABORATORY REPORT

AMT Laboratories • 3741 Greenway Circle • Lawrence, Kansas 66046 • (888) 376-3600

FOR: Lindsey Hannah, KMEW USA Inc.
cc: Jake Boyer, PROSOCO, Inc.
Dave Sommer
Al Morris, PROSOCO, Inc.

SUBJECT: KMEW USA Inc.
Redmond, WA
Pallet Tag Evaluation

DATE: August 23, 2018
PROJECT: 1808-20 PTP

SAMPLES SUBMITTED: Fiber Cement Panel Piece

Block	Name	Color	Size
(2) Fiber Cement Panel Piece	Solido	Stippled Gray	18" x 11" x 0.5"

SUBMITTED BY: Lindsey Hannah
KMEW USA Inc.
15359 NE 90th Street
Redmond, WA



PURPOSE OF TEST:

- To determine the effectiveness of appropriate PROSOCO, Inc. products in preventing food and oil staining on the submitted fiber cement panel pieces.

PRODUCTS EVALUATED:

Submitted "Solido" Panel	
Stain Resistance	Dilution:
PROSOCO® SLX100® Water & Oil Repellent	Concentrate
Stand Off® Limestone & Marble Protector	Concentrate
Consolideck® Concrete Protector WB	Concentrate
Consolideck® Concrete Protector SB	Concentrate

SAMPLE PREPARATION: Treatments

Each water repellent was applied in a brushing application in accordance with the current PROSOCO, Inc. Product Guide instructions. The treatments were allowed to cure for at least 72 hours prior to the stain testing described below.

TEST METHODS: Surface Beading Evaluation

Food and Oil Products Evaluated for Stain Testing:

Temperature:

Coca Cola	ambient (~70°F)
Ketchup	ambient (~70°F)
Mustard	ambient (~70°F)
Red wine	ambient (~70°F)
Balsamic vinegar	ambient (~70°F)
Soy sauce	ambient (~70°F)
Olive oil	ambient (~70°F)
Wesson oil	250°F
Coffee	120°F

The food and oil products were applied to the test areas by using a dropper creating a bead 0.5 – 1.0 cm in diameter. The beading properties of the oils and liquids were visually evaluated within two minutes after application. The results are reported as a rating based on the angle of contact between the base of the droplet and the substrate. A rating of "1 or 2" indicated the smallest angle of contact (<90°) which correlates to "above average" repellency. A rating of "3 or 4" indicates "average" repellency. A rating of "5 or greater" indicated that the oil quickly absorbed into the substrate and correlates to "below average" repellency.

Note: Non-free flowing staining agents such as ketchup and mustard are applied in a blob and not evaluated for their beading properties.

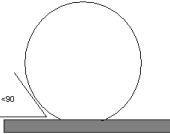
TEST METHODS: Surface Beading Evaluation (cont.)

Rating System (1-5)

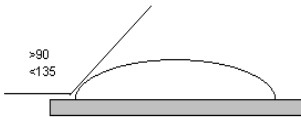
1. No wetting of contact area (no darkening); angle less than 90°



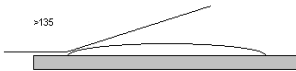
2. Wetting contained to the contact area (slight darkening); angle is less than 90°



3. Wetting contained to the contact area (slight darkening); angle is greater than 90° , but less than 135° .



4. Wetting beyond the contact area (darkening); angle is greater than 135°



5. Wetting beyond the contact area (darkening); angle is flat.



PHOTOGRAPHS: Treatment Application

“Solido” Panel Before Treatment



SLX100®

“Solido” Panel After Treatment

Concrete Protector WB



Untreated Control

Limestone & Marble Protector

Untested Area

Concrete Protector SB

TEST RESULTS: Surface Beading Evaluation

“Solido” Panel					
	Untreated	SLX100®	LMP	Concrete Protector WB	Concrete Protector SB
Coca Cola	5	2	3	3	2
Ketchup	N/A	N/A	N/A	N/A	N/A
Mustard	N/A	N/A	N/A	N/A	N/A
Red Wine	4	3	3	3	3
Bals. Vin.	4	3	3	3	3
Soy Sauce	4	3	3	3	3
Olive Oil	5	3	3	3	3
Wesson Oil	5	3	3	4	3
Hot Coffee	4	3	3	4	3

N/A – non-free flowing staining agent

TEST METHODS: Stain Resistance Evaluation

The soiling agents were allowed to dwell on the treated and untreated substrate for times of 24 hours, 4 hours, 1 hour, and 10 minutes. The test areas were then cleaned with Enviro Klean® 2010 All Surface Cleaner diluted with ten parts water and scrubbed under a stream of running water. The sample was allowed to dry for 24 hours. Evaluation consisted of a visual examination of the tested areas to determine the percentage of staining removal.

TEST RESULTS: Stain Resistance Evaluation

“Solido” Panel

% Removal

Untreated Control									
	Cola	Ketch.	Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive Oil	Wess. Oil	Coffee
24 hour	95%	95%	40%	100%*	100%	100%	10%	10%	98%
4 hour	100%	100%	80%	100%*	75%	75%	10%	10%	100%
1 hour	100%	100%	100%	100%	95%	95%	20%	20%	100%
10 min.	100%	100%	100%	100%	100%	100%	30%	30%	100%
PROSOCO® SLX100® Water & Oil Repellent									
	Cola	Ketch.	Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive O.	Wess. Oil	Coffee
24 hour	100%	100%	80%	100%*	100%	100%	40%	40%	95%
4 hour	100%	100%	95%	100%*	100%	100%	80%	80%	100%
1 hour	100%	100%	100%	100%	100%	100%	95%	95%	100%
10 min.	100%	100%	100%	100%	100%	100%	100%	100%	100%
Stand Off® Limestone & Marble Protector									
	Cola	Ketch.	Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive O.	Wess. Oil	Coffee
24 hour	100%	100%	5%	100%*	95%	100%	10%	10%	100%
4 hour	100%	100%	90%	100%*	95%	100%	70%	70%	100%
1 hour	100%	100%	100%	100%	100%	100%	90%	90%	100%
10 min.	100%	100%	100%	100%	100%	100%	98%	98%	100%
Consolideck® Concrete Protector WB									
	Cola	Ketch.	Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive O.	Wess. Oil	Coffee
24 hour	100%	100%	50%	100%*	100%*	98%	20%	20%	80%
4 hour	100%	100%	90%	100%*	100%*	98%	20%	20%	90%
1 hour	100%	100%	100%	100%*	100%	100%	30%	30%	100%
10 min.	100%	100%	100%	100%	100%	100%	80%	80%	100%
Consolideck® Concrete Protector SB									
	Cola	Ketch.	Must.	Red Wine	Bals. Vin.	Soy Sauce	Olive O.	Wess. Oil	Coffee
24 hour	100%	100%	5%	100%*	100%	100%	30%	30%	90%
4 hour	100%	100%	90%	100%*	100%	100%	40%	40%	95%
1 hour	100%	100%	100%	100%	100%	100%	80%	80%	100%
10 min.	100%	100%	100%	100%	100%	100%	90%	90%	100%

% Removal of stain following maintenance cleaning.

* Indicates etching of surface treatment due to the acidic nature of the staining agent.

CONCLUSIONS: Surface Beading and Stain Resistance

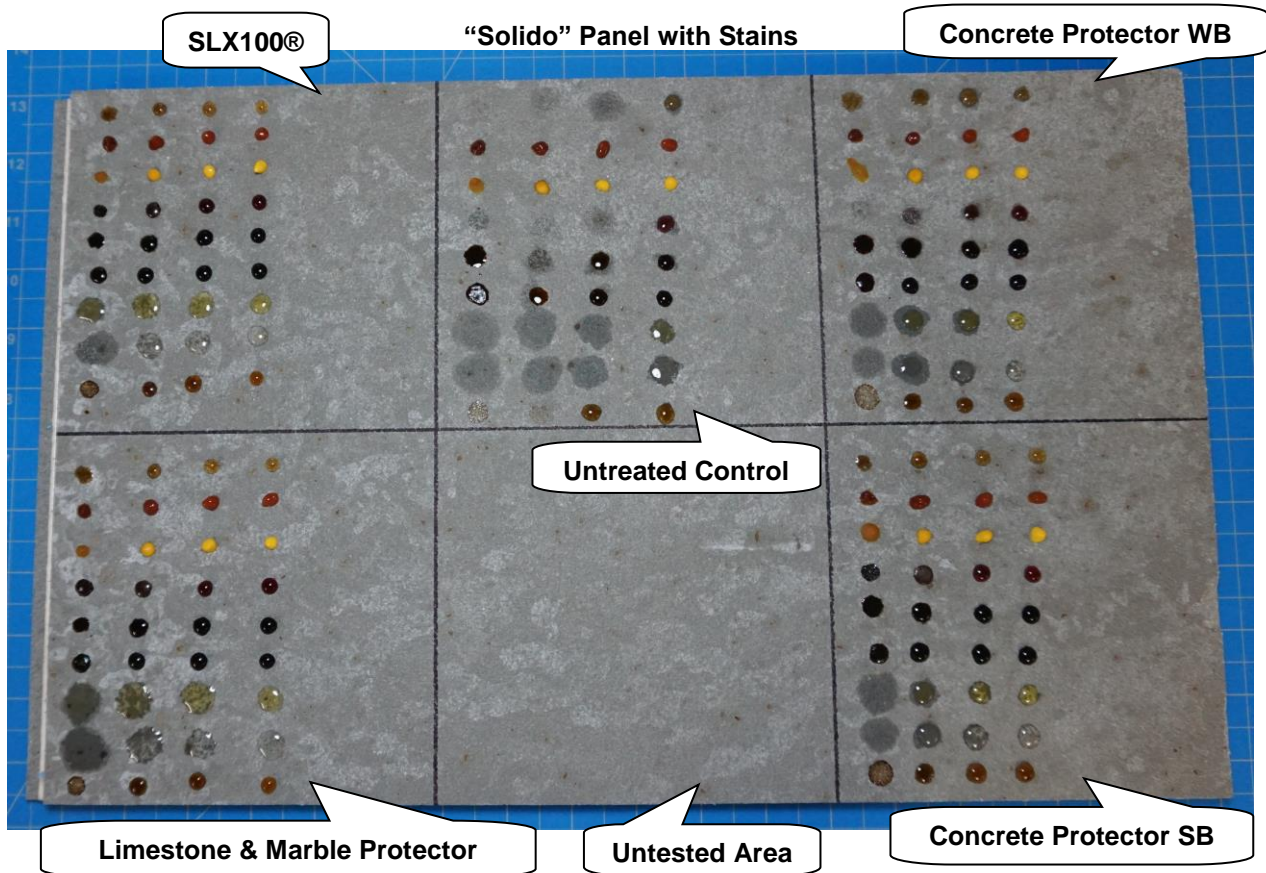
In the surface beading evaluation, PROSOCO® SLX100® Water & Oil Repellent, Stand Off® Limestone & Marble Protector, and Consolideck® Concrete Protector SB had the smallest angle of contact with each stain applied which correlates to “above average” repellency.

In the stain resistance tests conducted, the most effective products at repelling the applied stains were PROSOCO® SLX100® Water & Oil Repellent and Stand Off® Limestone & Marble Protector.

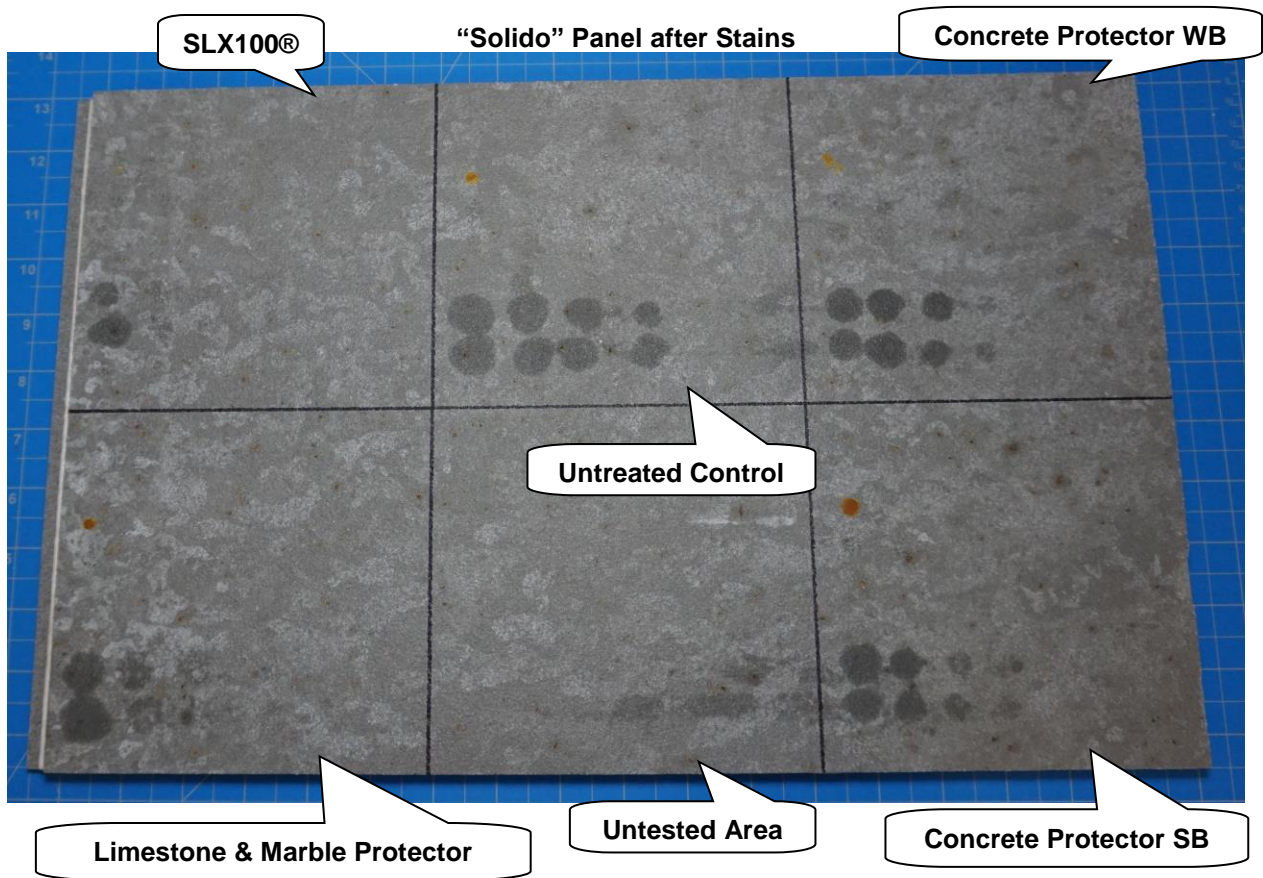
None of the treatments evaluated caused any change to the appearance of the “Solido” panel.

NOTE: Due to the surface irregularities of the sample, the substrate’s stain resistance may vary from one area of the panel to another.

PHOTOGRAPHS: Stain Resistance



PHOTOGRAPHS: Stain Resistance (cont.)





Recommendations: Stain Resistance

Recommendations for stain resistance for the “Solido” panel submitted by KMEW USA Inc., Redmond, WA are provided in the chart below. Recommendations are based on the treatments that proved most effective for providing stain repellency on the submitted panel.

Sample	Stain Repellent	Maintenance Cleaner
“Solido” Panel	¹ PROSOCO® SLX100® Water & Oil Repellent OR ² Stand Off® Limestone & Marble Protector	Enviro Klean® 2010 All Surface Cleaner (1:10)

NOTE: “1” indicates the most effective treatment and “2” indicates the second most effective treatment.

The ability of a stain repellent treatment to prevent staining is affected by a variety of factors. Therefore, on-site testing should be carried out for all installations with the recommended systems to ensure job site workmanship yields equivalent results.

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate stain repellent product and procedures for a particular project. See product literature for additional application and product information.

J. Lucas Comadoll
QC/Project Testing Technician

ALL SAMPLES SUPPLIED FOR THE ABOVE EVALUATION WILL BE DISPOSED OF THIRTY (30) DAYS AFTER THE ISSUE DATE OF THIS REPORT. IF SAMPLES ARE TO BE RETAINED FOR ADDITIONAL TESTING OR RETURNED TO THE SENDER, PROVIDE WRITTEN INSTRUCTIONS TO THE LABORATORY WITHIN THIRTY (30) DAYS OF THE ISSUE DATE OF THIS REPORT.

Recommendations made within this report are based on laboratory test applications and observations. Final determination of the suitability of a product and/or procedure should be made only after thorough job testing on actual surfaces.