



**CONSOLIDECK<sup>®</sup>**  
**HIGH PERFORMANCE CONCRETE**  
Products for ultimate sustainable concrete floors

# Test Results

Consolideck<sup>®</sup> LS<sup>®</sup>

**PROSOCO**  
SINCE 1939

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# Abrasion Resistance - Taber Abraser

## LS® & competition vs. Untreated Control

### TEST

Taber Abrasion Testing  
**H22 Wheel, 1000 gram load** using ASTM C1353  
 modified for concrete.

### RESULT

% Improvement vs. Control

Concrete Treated with Consolideck® LS®	59
Concrete Treated with Competitive Product A	29
Concrete Treated with Competitive Product B	29
Concrete Treated with Competitive Product C	37
Concrete Treated with Competitive Product D	42
Concrete Treated with Competitive Product E	46

#### Notes

This test establishes abrasion resistance of concrete to simulated foot traffic using grinding wheels under specified loads for a specified time. The results show LS-treated concrete reduced abrasion loss by 59% compared to untreated concrete. Other concrete hardeners had less reduction of abrasion.

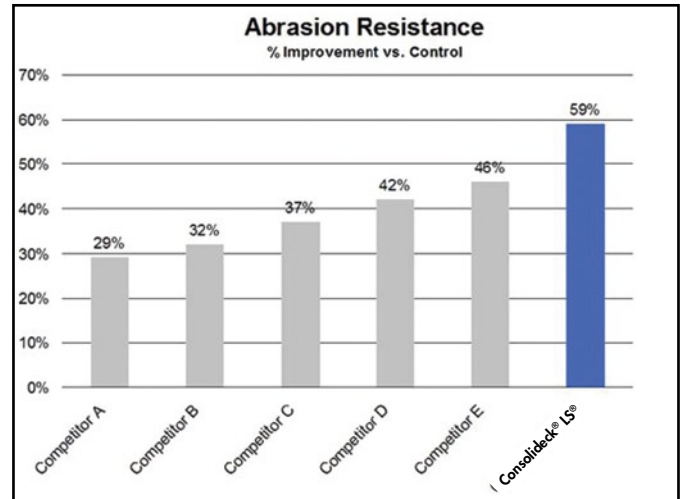


Fig. 1 - LS® and competitors vs. control

## Hardened & Polished vs. Untreated Control

### TEST

Taber Abrasion Testing **H22 Wheel, 1000 gram load**

### RESULT

% Improvement vs. Control

Control	100%
Hardened & Polished	521%

#### Notes

Tiles received one coat of LS, then were polished to 3,000 grit.  
 Graph shows more than 500 percent improvement in abrasion resistance over untreated, unpolished control.

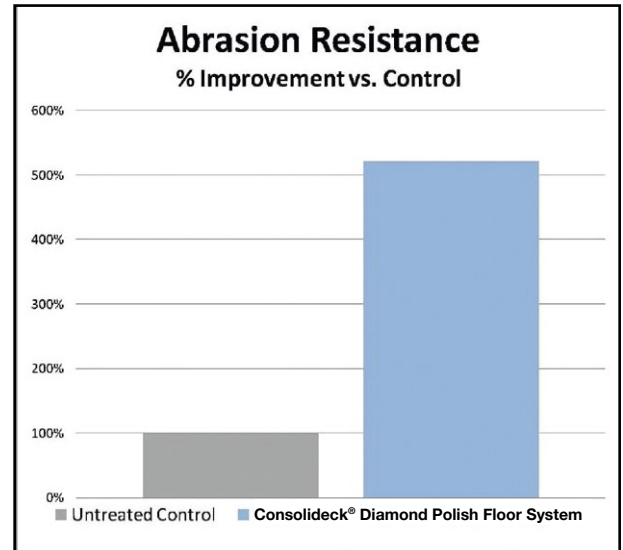


Fig. 2 - Improvement in abrasion resistance

# Abrasion Resistance - Micro Abraser

## LS® vs. Untreated Control

TEST	RESULT		Notes
Micro Abrasion Resistance Testing ASTM C418 Abrasion Resistance of Concrete	Average Weight Loss Grams	% Improvement	This test evaluates the relative resistance of a treated concrete surface to air-driven sand compared to untreated concrete. Results show that the LS-treated standard concrete had 27% less abrasion loss and the LS-treated shake-on concrete had 40% less abrasion loss than untreated concrete.
<b>Standard Finish Concrete</b>			
Treated with LS®	0.296	27	
Untreated Control	0.407		
<b>Green-colored (shake-on) Concrete</b>			
Treated with LS®	0.164	40	
Untreated Control	0.275		

# Water Vapor Transmission (breathability)

## LS® vs. Untreated Control

TEST	RESULT	Notes
ASTM E96 Water Vapor Transmission of Materials	WVT retained	This test determines the rate of water vapor passage through a material or applied film on a substrate under controlled temperature and humidity. The results show the LS-treated concrete allows the same rate of water vapor transmission as the untreated concrete.
<b>Concrete Treated with LS®</b>	<b>100 percent</b>	

# Slip Resistance

## ASTM C 1028 - Determining the Static Coefficient of Friction

### LS® Treated

Finish	Dry	Wet
Steel Troweled	0.720	0.664
Honed (up to 100 grit)	0.759	0.654
Polished (up to 800 grit)	0.865	0.645
Highly polished (up to 3,000 grit)	0.919	0.766

### LS® & LSGuard® Treated

Dry	Wet
0.841	0.600
0.836	0.601
0.822	0.606
0.841	0.695

### Notes

This test determines the static coefficient of friction of flooring surfaces under wet and dry conditions. The results show that the tested surfaces exceed OSHA and ADA recommendations for slip-resistance.

# Adhesion

## LS® vs. Untreated Control

TEST	RESULT
ASTM D4541 Pull-Off of Coatings Using Type II Tester	pounds per square inch
<b>Steel-troweled concrete</b>	<b>Steel-troweled concrete</b>
Treated with LS®	483
Untreated control	400

### Notes

This test evaluates pull-off strength (adhesion) of a coating applied to a hard surface like concrete. The test results show that concrete treated with LS exhibited greater coatings-adhesion than untreated.

# Stain Resistance

## TEST METHODS: Stain Resistance – ASTM D 1308

The treatment was applied in accordance with PROSOCO, Inc. Product Data Sheet instructions and allowed to cure for 7 days prior to testing. The soiling agents were allowed to dwell on the treated and untreated substrates for times of 15 minutes and 1 hour. Evaluation consisted of a visual examination of the tested areas to determine the effect the reagent had on the sample using the following scale:

E = Excellent (No Adverse Effects)  
 G = Good (Limited Adverse Effects)  
 F = Fair (Moderate Adverse Effects)  
 P = Poor (Unsatisfactory)

Acids	Effect 15 min.	Effect 1 Hour	Bases	Effect 15 min.	Effect 1 Hour
10% Citric	G	G	5% Ammonium Hydroxide	E	E
10% Acetic	G	F	30% Ammonium Hydroxide	E	E
10% Oxalic	G	G	10% Potassium Hydroxide	E	E
10% Hydrochloric	F	G	45% Potassium Hydroxide	G	G
35% Hydrochloric	P	P	10% Sodium Hydroxide	G	G
10% Phosphoric	G	F	50% Sodium Hydroxide	E	G
70% Phosphoric	F	F			
10% Sulfuric	G	F	<b>Solvents</b>		
50% Sulfuric	G	G	Acetone	E	G
			Mineral Spirits	E	E
<b>Alcohols</b>			Xylene	E	E
Benzyl Alcohol	G	G	MEK	E	E
Ethyl Alcohol	E	G			
Isopropyl Alcohol	G	E	<b>Hydraulic Fluids/Oils / Fuels</b>		
Methyl Alcohol	E	E	Gasoline	E	E
Ethylene Glycol	E	E	Brake Fluid	G	G
			Motor Oil	G	G
<b>Salts</b>			Automatic Transmission Fluid	G	G
Ammonium Chloride	G	G	Skydrol	G	G
Calcium Chloride	E	E			
Sodium Bicarbonate	E	E	<b>Other Chemicals/ Misc.</b>		
Sodium Chloride	E	E	Cola	G	G
Sodium Carbonate	E	G	Mustard	G	F
			Ketchup	G	G
			Red Wine	G	G
			Balsamic Vinegar	G	G
			Vegetable Oil	G	G
			Bleach (Sodium Hypochlorite)	E	E
			Tap Water	E	G
			Laundry Detergent (Tide)	E	E
			Lemon Juice	G	F

Test results were obtained under laboratory conditions. Reasonable variations can be expected due to environmental conditions, etc.



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