



PRI Construction Materials Technologies LLC

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Laboratory Test Report

Report for: Jason Rochester
Stepstone, LLC
17025 South Main St.
Gardena, CA 90248

Product Name(s): See sampling section

Project No.: 2806T0003

Dates Tested: Mar. 20, 2025

Test Methods: ASTM C 1371
ASTM C 1549
ASTM E 1980

Results Summary: See Results table

Purpose: Determine the solar reflectance, thermal emittance, and solar reflectance index value(s) of Stepstone, LLC's Cal Arch Paver with Slag color portfolio.

Test Methods: The test methods used included ASTM C 1549-16: *Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Reflectometer* and ASTM C 1371-15: *Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers*. Thermal emittance measurement for samples was modified in accordance with Devices and Services Company's Tech Note 04-1. Both of these methods are Energy Star, Leadership in Energy and Environmental Design (LEED), and Cool Roof Rating Council (CRRC) approved methods for determining radiative properties.

The solar reflectance index (SRI) was calculated in compliance with ASTM E 1980-11: *Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces* utilizing Approach II.

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Sampling: The following materials were received by PRI. Specimens provided were Cal Arch Pavers including slag, with light sandblast finish.

| <u>Product</u> | <u>Source</u> | <u>Date</u> | <u>Sampling</u> |
|----------------------------|---------------|--------------|-----------------|
| Porcelain #1413 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC |
| Granada White #1401 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC. |
| Almond #1406 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC. |
| Iceberg Green #1405 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC. |
| Caramel #1410 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC. |
| Kona Brown #1421 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC. |
| Agave Green # 1412 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC |
| Adobe #1425 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC. |
| French Gray #1404 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC. |
| Café Brown #1407 (slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC |
| Pebble #1424 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC |
| Brick Red #1416 (Slag) | Gardena, CA | May 16, 2025 | Stepstone, LLC |

Results:

| Property | Solar Reflectance | | Thermal Emittance | | SRI | | |
|---|--------------------------|----------|--------------------------|----------|--------------------------|----------|-----------|
| | ASTM C 1549 ¹ | | ASTM C 1371 ² | | ASTM E 1980 ³ | | |
| | Avg. | Std.Dev. | Avg. | Std.Dev. | Low-Wind | Med-Wind | High-Wind |
| Solar Reflective Index (SRI) 1 Specimen 4" x 4" Test @ 73.4±3.6°F & 50±10%RH; | | | | | | | |
| Porcelain #1413 Light Sandblast finish | 0.352 | 0.007 | 0.91 | 0.00 | 39 | 39 | 40 |
| Granada White #1401 Light Sandblast finish | 0.478 | 0.012 | 0.91 | 0.00 | 56 | 56 | 56 |
| Almond #1406 Light Sandblast finish | 0.371 | 0.004 | 0.91 | 0.00 | 41 | 42 | 42 |
| Iceberg Green #1405 Light Sandblast finish | 0.427 | 0.008 | 0.91 | 0.00 | 49 | 49 | 49 |
| Caramel #1410 Light Sandblast finish | 0.364 | 0.009 | 0.91 | 0.00 | 41 | 41 | 41 |
| Kona Brown #1421 Light Sandblast finish | 0.179 | 0.003 | 0.91 | 0.00 | 17 | 17 | 17 |
| Agave Green # 1412 Light Sandblast finish | 0.227 | 0.002 | 0.91 | 0.00 | 23 | 23 | 24 |

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| Property | Solar Reflectance | | Thermal Emittance | | SRI | | |
|---|--------------------------|----------|--------------------------|----------|--------------------------|----------|-----------|
| | ASTM C 1549 ¹ | | ASTM C 1371 ² | | ASTM E 1980 ³ | | |
| | Avg. | Std.Dev. | Avg. | Std.Dev. | Low-Wind | Med-Wind | High-Wind |
| Adobe #1425 Light Sandblast finish | 0.264 | 0.004 | 0.91 | 0.00 | 28 | 28 | 28 |
| French Gray #1404 Light Sandblast finish | 0.215 | 0.004 | 0.91 | 0.00 | 21 | 22 | 22 |
| Café Brown #1407 Light Sandblast finish | 0.273 | 0.002 | 0.91 | 0.00 | 29 | 29 | 29 |
| Pebble #1424 Light Sandblast finish | 0.329 | 0.004 | 0.91 | 0.00 | 36 | 36 | 37 |
| Brick Red #1416 Light Sandblast finish | 0.232 | 0.006 | 0.91 | 0.00 | 23 | 24 | 24 |

Note(s):

- 1- Reflectance measurements were conducted using a Devices and Services SSR-ER Version 6.4 Reflectometer operated in v5 emulation mode and calibrated with Devices and Services Reference Tile # D-18.
- 2- Emittance measurements were conducted using a Devices and Services Emissometer Model AE calibrated with Devices and Services Reference Standards: High Emittance: 0.86 and Low Emittance: 0.06. Thermal emittance measurement for sample was modified in accordance with Devices and Services Company's Tech Note 04-1.
- 3- SRI calculations per ASTM E1980, Approach II utilize the following assumptions: Low-Wind $h_c = 5 \text{ W/m}^2\text{-K}$, Medium-Wind $h_c = 12 \text{ W/m}^2\text{-K}$, and High-Wind $h_c = 30 \text{ W/m}^2\text{-K}$.

Statement of Attestation: The Solar Reflectance Index of these samples was calculated in accordance with **ASTM E 1980: Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces**. The laboratory test results presented in this report are representative of the materials supplied.

Signed:


 Anthony Catlett
 Manager

Date:

Jun. 5, 2025

Report Issue History:

| Issue # | Date | Pages | Revision Description (if applicable) |
|----------|------------|-------|--------------------------------------|
| Original | 06/05/2025 | 3 | NA |

END OF REPORT

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