

# Instrumented Surface Indenter Testing Report

ASTM Designation: FXXXX-XX Work Item Number: 2019-07-16 subcommittee ballot of Standard Test Method for a Portable Instrumented Surface Indenter for Measurement of Firmness and Stability

Test Institution	
Name	<u>Beneficial Designs, Inc.</u>
Address	<u>PO Box 69</u> <u>Minden, NV 89423</u>
Phone	<u>775.783.8822</u>
Operator	<u>Emery Schreckengost</u>
Data recorder	<u>Emery Schreckengost</u>

Rotational Penetrometer	
Manufacturer	<u>Beneficial Designs, Inc.</u>
Serial number: BDRP-	<u>101</u>
Date of last calibration	<u>2019-12-10</u>
Tire pressure set at 36 psi. on	<u>2020-10-09</u>
by <u>E. Schreck</u>	Temp. °F <u>75</u>

Date & Time of Test	
Date	<u>2020-10-09</u>
Time	<u>2:30 pm</u>

Testing Conditions	
Temperature °F	<u>75</u>
Relative Humidity %	<u>11</u>
If the temperature is more than 10 °F different than the temperature at the tire pressure check, re-check tire pressure before starting to test.	

Test Surface	
Manufacturer	<u>Kafka Granite</u>
Name	<u>Wax Polymer Pathway Mix</u>
Type	<u>Stabilized Surface</u>
Source	<u>Kafka Granite</u>
Date of mfr	<u>unknown</u>
Depth	<u>4.25 inch</u>
Slope	<u>1.6 %</u>
Location	<u>1493 Willow Creek Ln</u> <u>Gardnerville, NV</u>

Test Results			
Record readings to nearest thousandth of an inch (0.001).			
Trial	Firmness (in)	Stability (in)	
1	<u>0.1600</u>	<u>0.1770</u>	
2	<u>0.1580</u>	<u>0.2270</u>	
3	<u>0.1800</u>	<u>0.1820</u>	
4	<u>0.1730</u>	<u>0.2380</u>	
5	<u>0.1600</u>	<u>0.1640</u>	
6	<u>0.1620</u>	<u>0.1740</u>	
7	<u>0.1490</u>	<u>0.2295</u>	
<b>Avg.</b>	<b>0.1626</b>	<b>0.1979</b>	
SD	0.0060	0.0279	

The high and low readings for firmness and stability are both removed. The remaining five values for firmness and stability are averaged.

Procedures used to install, compact and/or level prior to testing: **See attached**  
 Method of stabilizing the surface reference plates: **Operator stood on the reference plates**

## Summary of Results

Beneficial Designs, Inc. received a surfacing sample from **Kafka Granite** with the brand name **Wax Polymer Pathway Mix**. This sample of **Wax Polymer Pathway Mix** had a firmness of **0.1626 in.** and stability of **0.1979 in.**

Report prepared by: Peter Axelson, Testing Supervisor      14 October 2020  
 Date