

## National Distribution 888-380-5575

## PORCELAIN PAVERS

## SLIP RESISTANCE / ASTM-E303

	TorTest <sup>™</sup> Floor Friction Testing Service SOTTER ENGINEERING CORPORATION Consultants
	26705 Loma Verde, Mission Viejo, CA 92691 Telephone: 949-582-0889 FAX: 949-916-2193
Licensed by the State of California Board of Professional Engineers And Land Surveyors	
<i>Approved by the City of Los Angeles for testing slip resistance of flooring</i>	
	ic Slip Resistance using (2013) Pendulum Test Method
Client: <b>Tile Tech Inc.</b>	Report date: 3/14/17
Flooring: <b>Porce Plank – Porcelain Pavers</b> Page 1 of 1 Sample no.: 170	
How and when sample obtained: Supplied by Location of test: Sotter Engineering Test Labo	oratory in Mission Viejo, CA
Type, age, condition, and texture of surface: p Post-test free swing: 0 Age of TRL slid	
	n is released from a horizontal position. The slider contact
path length is pre-set to five inches. The pend the pendulum's swing. For road-related testin soft rubber. Higher Pendulum Test Values (PTV) indicate	ulum pushes a pointer that stops and stays at the high point of g, the slider is usually TRL (Transport & Road Laboratory) increased friction. For reference only, with TRL rubber the e cloth at normal room temperature is approximately 57. For
path length is pre-set to five inches. The pend the pendulum's swing. For ræd-related testin soft rubber. Higher Pendulum Test Values (PTV) indicate PTV of wet #60 grade silicon carbide abrasive clear wet float glass it is 8. <b>Average Wet P</b> Individual High Pendulum Test Values indicate poter recommends a <b>minimum</b> pendulum test va factors such as floor coatings, abrasives, dete	ulum pushes a pointer that stops and stays at the high point of g, the slider is usually TRL (Transport & Road Laboratory) increased friction. For reference only, with TRL rubber the
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path length is pre-set to five inches. The pend the pendulum's swing. For ræd-related testin soft rubber. Higher Pendulum Test Values (PTV) indicate PTV of wet #60 grade silicon carbide abrasive clear wet float glass it is 8. <b>Average Wet P</b> Individual High Pendulum Test Values indicate poter recommends a <b>minimum</b> pendulum test va factors such as floor coatings, abrasives, dete of 25-35 are classed as "moderate sli	ulum pushes a pointer that stops and stays at the high point of g, the slider is usually TRL (Transport & Road Laboratory) e increased friction. For reference only, with TRL rubber the e cloth at normal room temperature is approximately 57. For <b>TV with TRL (soft) rubber: 44</b> PTV values: 44, 44, 44, 44 thially good traction. The Ceramic Tile Institute of America alue of <b>36</b> for level floors. Slip resistance can be affected by orgents, contamination, chemical treatments, and wear. Values p potential". Values of 024 have "high slip potential".



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	nic Slip Resistance using 3 (2013) Pendulum Test Method
Client: Tile Tech Inc.	Report date: 3/14/17
Flooring: Porce Rustica – Porcelain Paver Page 1 of 1 Sample no.: 17	703-1323 Date tested: 3/13/17
How and when sample obtained: Supplied by Location of test: Sotter Engineering Test Lab	
Type, age, condition, and texture of surface: Post-test free swing: 0 Age of TRL sli	paver, new, clean, rough
soft rubber.	ng, the slider is usually TRL (Transport & Road Laboratory)
	te increased friction. For reference only, with TRL rubber the ve cloth at normal room temperature is approximately 57. For
PTV of wet #60 grade silicon carbide abrasiv clear wet float glass it is 8. Average Wet Individua High Pendulum Test Values indicate pote recommends a minimum pendulum test v factors such as floor coatings, abrasives, det	
PTV of wet #60 grade silicon carbide abrasiv clear wet float glass it is 8. Average Wet Individua High Pendulum Test Values indicate pote recommends a minimum pendulum test v factors such as floor coatings, abrasives, det	ve cloth at normal room temperature is approximately 57. For <b>PTV with TRL (soft) rubber: 60</b> Il PTV values: 59, 60, 60, 60 entially good traction. The Ceramic Tile Institute of America value of <b>36</b> for level floors. Slip resistance can be affected by tergents, contamination, chemical treatments, and wear. Value lip potential". Values of 024 have "high slip potential".



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# Dynamic Slip Resistance using ASTM E303-93 (2013) Pendulum Test Method

Client: Tile Tech Inc.Report date: 3/14/17Flooring: Porce Stone - Porcelain PaversPage 1 of 1Sample no.: 1703-1321Date tested: 3/13/17Page 1 of 1Sample no.: 1703-1321Date tested: 3/13/17How and when sample obtained: Supplied by client 3/9/17Location of test: Sotter Engineering Test Laboratory in Mission Viejo, CAType, age, condition, and texture of surface: paver, new, clean, bumpyPost-test free swing: 0Age of TRL slider: 1 monthSurface Temperature: 70°F

American Society for Testing and Materials Method E303-93 (2013), "Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester" (astm.org) The trailing edge of a three-inch-wide spring-loaded slider, which is attached to the end of a 20-inch pendulum, contacts the tested surface when the pendulum is released from a horizontal position. The slider contact path length is pre-set to five inches. The pendulum pushes a pointer that stops and stays at the high point of the pendulum's swing. For rad-related testing, the slider is usually TRL (Transport & Road Laboratory) soft rubber.

Higher Pendulum Test Values (PTV) indicate increased friction. For reference only, with TRL rubber the PTV of wet #60 grade silicon carbide abrasive cloth at normal room temperature is approximately 57. For clear wet float glass it is 8.

#### Average Wet PTV with TRL (soft) rubber: 50 Individual PTV values: 51, 50, 50, 49

High Pendulum Test Values indicate potentially good traction. The Ceramic Tile Institute of America recommends a **minimum** pendulum test value of **36** for level floors. Slip resistance can be affected by factors such as floor coatings, abrasives, detergents, contamination, chemical treatments, and wear. Values of 25-35 are classed as "moderate slip potential". Values of 924 have "high slip potential".

Respectfully submitted, SOTTER ENGINEERING CORPORATION

Learge Latte

J. George Sotter, P.E., Ph.D. President



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