



Increasing Safety by Reducing Risk

BS7976 -2 Pendulum Slip Test

Customer: Wallbarn Ltd

Test Number: FS10174

Operator: Glenn MacLaughlan

Date of Test: 20th April 2016

On Site: Samples sent to office

Pendulum Calibration Number: CN302

Pendulum serial number: SK1698

Slider Type :Fours 96

Contaminate Description: Water

Reference: Cumaru - Timber Tiles



Calibration Checks Done:

lapping accepted 65+/-3	64	63	63	63	62
Glass accepted:7+/-3	9	8	8	8	8

Theory

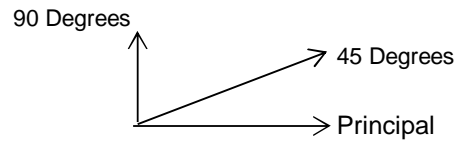
A site assessment is an important component in determining the slip risk of any given floor. The HSE's pedestrian slip potential model highlights important environmental factors in a slip. Contaminating substances, frequency and methods of cleaning, types of footwear and likely pedestrian behaviour all affect the potential for a slip incident and are given due consideration.

Research carried out by the Health and Safety Laboratory, in conjunction with the UK Slip Resistance Group (UKSRG), has shown that it is possible to assess the characteristics of floor surface materials needed for satisfactory slip resistance. The Health and Safety Laboratory has developed a "reliable and robust" test method that forms the basis of Floor Safes assessment procedure.

The pendulum skid test forms the basis of the coefficient of dynamic friction measurement of a floor. A calibrated 'foot' swings from a horizontal point of release, strikes the flooring surface for a known distance, then reads the "pendulum test value" on its over swing. The rubber slider that contacts the floor is constructed of '4S' rubber (Standard Simulated Shoe Sole) and is designed to replicate the most common slipping motion experienced by pedestrians wearing shoes. A softer, more malleable, rubber (TRL rubber) may be used to simulate a barefoot or casual shoe slip. Pendulum testing is one of the few methods that models the formation of a hydrodynamic squeeze film between the floor and shoe sole, a major factor in a wet slip.

Test surfaces are subject to eight measurements of the PTV with the first three being discounted from calculations of the mean.

A prepared standard rubber slider attached to a weighted 'shoe' is allowed to swing from a horizontal point of release. The slider is mounted on a spring loaded bracket and makes contact with the floor for a known distance. The height to which the shoe travels after contacting the floor gives a reading of the Pendulum Test Value (PTV, formally known as SRV Slip Resistance Value). The dynamic coefficient of friction of a test surface has a direct and measurable effect on the PTV reading obtained.



HSE Guidelines for pedestrian slip

0 – 24	High Risk for Slip potential
25 – 35	Moderate Risk for Slip Potential
36+	Low Risk for slip potential.

<u>Test Swings</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>Result PTV</u>	<u>Risk level of slip potential</u>
Dry Principal	60	59	58	58	58	58	58	58	58	Low
Dry 45 degree	57	56	55	55	55	55	55	55	55	Low
									Result 56.5 ptv	Low Risk
Wet Principal	28	27	26	25	25	25	25	25	25	Moderate
Wet 45 degree	34	32	31	31	31	31	31	31	31	Moderate
									Result 28 ptv	Moderate Risk

Glenn MacLaughlan is the Director of Floor Safe Ltd. The company was started in 2007 and over the last 8 years has provided pendulum slip testing for many major UK businesses. Clients include: .

CONSTRUCTION INDUSTRY – COUNCILS:

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ST HELENS – BEFORDSHIRE - IPSWICH - ST ALBANS - BRADFORD - LUTON - HORSHAM – BIRMINGHAM.

LEISURE – HOTELS – RESTAURANTS:

DAVID LLOYD – BANNATYNE – AMEDIA – FITNESS FIRST -HILTON – RAMADA – MARRIOT – BROWNS – CLARIDGES – TRAVELODGE PREMIER INN – JURYS INN -NANDOS – CARLUCCIOS – COTE – BYRON – TGI FRIDAY – STARBUCKS – CAFE ROUGE – CAFE NERO – WETHERSPOONS – GREGGS.

OTHER:

NHS – WEMBLEY – THE O2 – LONDON OLYMPICS 2012 BASKETBALL STADIUM – BRIGHTON AND HOVE ALBION FC – EATON AEROSPACE - LUTON AIRPORT – HEATHROW AIRPORT – JONES LANG LASSALLE – HAMMERSON – SELFRIDGES – HARRODS.



The Pendulum Slip Value Readings were correct at the time of test. However this does not indicate the readings will remain the same this can be due to the installation, daily maintenance and the volume of foot falls.

If a sample has been sent for lab testing we highly recommend a re-test in situ.

Anti slip stone treatments applied by Floor Safe will rapidly diminish if not maintained as directed by Floor Safe Ltd on a daily basis.

Warranty of Floor Safe Ltd anti slip applications are invalid if the recommended maintenance regime is not adhered to.

Reported results in no way imply that the flooring under test is approved or endorsed by Floor Safe Ltd

Floor Safe Ltd do not give or assume warranty or condition, express or implied, statutory or otherwise, as to condition, quality, performance, merchantability or fitness for the purpose of the test subject and all such warranties and conditions are hereby excluded save to the extent that such exclusion is absolutely prohibited by law. Floor Safe Ltd shall not be liable for any subsequent loss or damage incurred by the client as a result of information contained within this report. **Results given herein refer only to areas or sample tested by Floor Safe Ltd**



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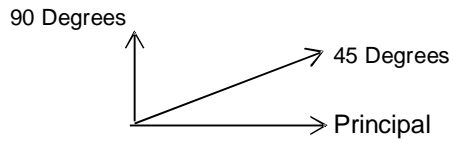
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Dry Principal	67	65	64	64	64	64	64	64	64	Low
Dry 45 degree	63	62	61	60	59	59	59	59	59	Low
									Result 61.5 ptv	Low Risk
Wet Principal	37	36	35	34	33	33	33	33	33	Moderate
Wet 45 degree	37	36	35	34	34	34	34	34	34	Moderate
									Result 33.5 ptv	Moderate Risk

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Floor Safe Ltd: 5 White Hill Rd - Barton le Clay - Bedfordshire MK45 4PF. 0845 643 1317
Registered in England and Wales no: 49553

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