



FLOOR TESTING CERTIFICATE

SlipTest Ltd

certifies that the floor surfaces at

ACME Shopping Centre

have been professionally tested for slip resistance

UK Guidelines Issue 4-2011, on the following dates

Test Number	Status	Date	Tester's Signature
1	<i>Tested</i>	04/06/14	<i>Belinda Bleakley</i>
2	<i>Tested</i>	06/12/14	<i>Belinda Bleakley</i>
3	<i>Tested</i>	05/06/15	<i>Belinda Bleakley</i>
4	<i>Due</i>	05/12/15	
5			
6			

**Slip resistance testing
Slip injury prevention**

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enquires@slipstest.info

**Company
Registration
No: 3545271**

Mr Centre Manager
Management Suite
ACME Shopping Centre
Springfield
Springfieldshire
SP1 1RN



10 June 2015

Dear Mr Manager

Enclosed are your Floor Safety Test Report and Test Certificate for the ACME Shopping Centre.

The format of the report includes the Health and Safety Executive SAT Test. We are confident that this format gives you a detailed assessment of the levels of safety of your floor surfaces.

Your invoice will be sent under separate cover. We would be grateful for prompt settlement.

We have provisionally booked your next routine test for the 5th December 2015.

I trust you have all the details you require, please do not hesitate to contact us if you need any further information.

Yours sincerely

Belinda Bleakley

Belinda Bleakley

Floor Safety Test Report

ACME Shopping Centre

5 June 2015

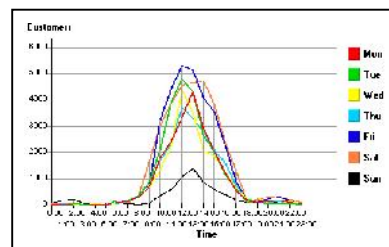


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Floor Safety Test Report

ACME Shopping Centre

5 June 2015

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EXECUTIVE SUMMARY



1. The SlipTest Ltd Floor Safety Test Method

At SlipTest Ltd, our floor testing method is the most comprehensive in the industry. We combine three test methods to come up with a detailed assessment of every aspect of your floor surfaces and the environmental factors that may affect them:

1. Pendulum/SlipAlert Slip Resistance Test
2. Health and Safety Executive (HSE) Slip Assessment Tool (SAT Test)
3. Surtronic Duo Roughness Test (also incorporated into the SAT Test)

Using the three methodologies, we can form a clear view of the slip potential of your flooring. Our technicians are trained in all three skills and experienced in interpretation of the results.

The test areas are chosen to give readings in well-used locations, typically high traffic-flow and entrances. At each location, following the U.K. Slip Resistance Guideline, tests are carried out five times in each of three different directions.

2. Slip Resistance Test Results

Location	As Found	Wet
	PTV	PTV
Outside Shop 01 Marble - uncleaned	40	32
Outside Shop 02 Marble - cleaned	51	31
Inside Entrance 01 Ceramic Tile	52	19
Inside Entrance 02 Terrazzo - cleaned	44	29
Top of Elevator 01 Terrazzo - uncleaned	45	31
Top of Elevator 02 Terrazzo - cleaned	49	31
Top of Stairs 01 Marble - uncleaned	48	30
Bottom of Stairs 01 Marble - uncleaned	49	35

Please note:

Dry test readings (ie: "As Found" in Column 1 above) give an accurate view of the capability of the floor in normal circumstances.

Wet test readings (Column 2 above) will usually give higher readings, which indicate higher risk only when the floor is contaminated by some form of liquid.

Control of spillage and other forms of contamination is essential in public areas.

Key	36 +	Low Risk of Slip
	25 - 35	Moderate Risk of Slip
	0 - 24	High Risk of Slip

EXECUTIVE SUMMARY - continued

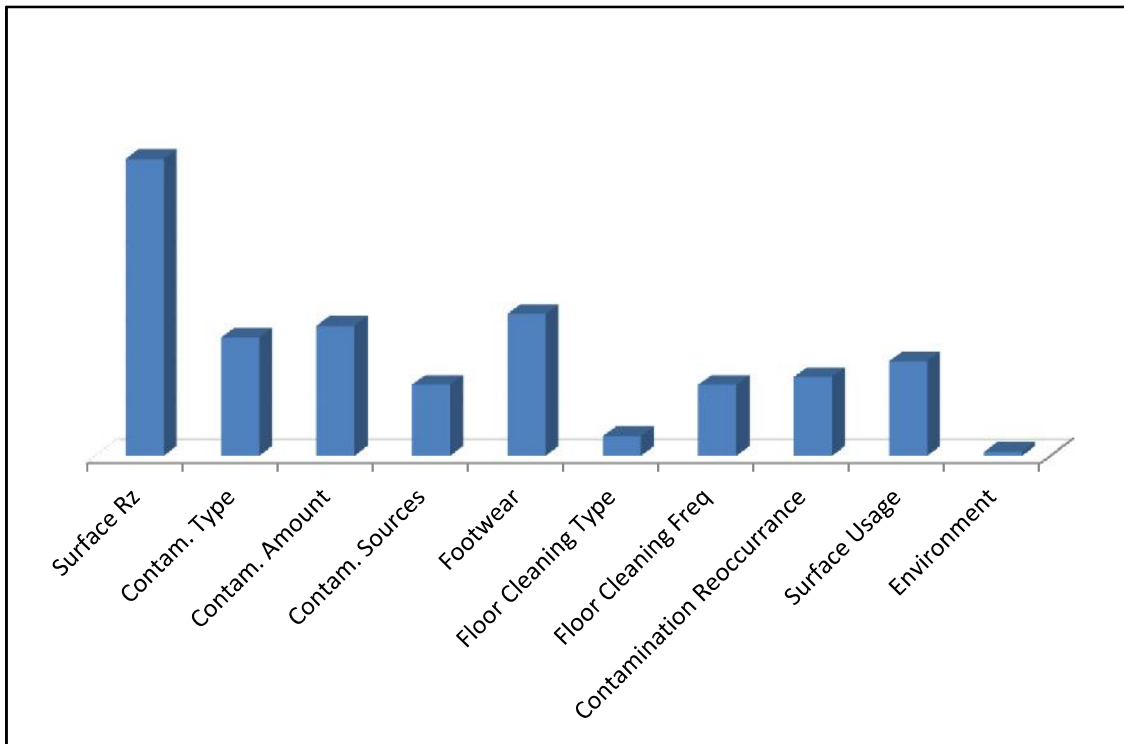


3. SAT Graph

The SAT test is a format devised by the Health and Safety Executive (HSE) and designed to give a snapshot assessment of in-situ flooring, taking into account all the relevant information about the floor and its environment.

HSE SAT TEST SCORE : 26

Medium Slip Risk



4. Technican's Summary

The floor was tested before and after cleaning with proposed new cleaning equipment. Both the wet and dry results are encouraging, however there are a couple of areas, which may need further attention.

Care needs to be taken at the locations close to fast food outlets to make sure that regular checks are carried out by cleaning staff during opening hours.



HEALTH AND SAFETY EXECUTIVE SAT TEST

SITE DETAILS

Date: 5 June 2015
Operator: B Bleakley
Centre: ACME Shopping Centre

Predominant Floor Type Terrazzo

Other floor surfaces tested: None

Floor etched or roughened? No
Roughness Meter Calibrated? Yes

Roughness Readings (μm)

17.7	10.9	12.5	5.1	3.0
8.3	13.1	8.1	7.6	3.7

Average Roughness Reading: **9.0**

Floor Surface Contamination: Dusty

Amount of Contamination: Very Light

Potential Contamination Sources: Wet Shoes

Footwear Soling Material: No control over footwear

Floor Cleaning Type: Mechanical Scrubber Drier

Floor Cleaning Frequency: Once a Day

Contamination Reoccurrence: Gradually after Cleaning

Floor Surface Usage: Pedestrians Pushing/Pulling
Pedestrians Carrying Loads
Rushing Pedestrians
All Pedestrians including Elderly/Very Young
Pedestrians with Disabilities

Environmental Factors:



HEALTH AND SAFETY EXECUTIVE SAT TEST

SITE DETAILS - Continued

Date: 5 June 2015
Operator: B Bleakley
Centre: ACME Shopping Centre

Dewatering Provision:

Location(s)	Provision	Length	Condition
Inside Entrance 01	Fixed & loose	10x5m	Good
Outside Shop 02	Fixed	1x3m	Good
Inside Entrance 02	Fixed & loose	8x3m	Good

Tests carried out on sloping floor surfaces at the following locations:

At Outside Shop 02

Test Conditions

Weather: Light Rain
Temperature range (°C) From: 16 To: 17
Area enclosed or open: Enclosed

Pendulum/Slip Alert Test Sheet 01

Date 5 June 2015

Site ACME Shopping Centre

Contract XXX

Customer Mr C Manager

Operator BB

Location Outside Shop 01

Location 1 of 8

Surface Marble - uncleaned

Data/Readings for a test distance of a minimum of 60cm with a 4S Rubber Slider

Condition: As Found	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	48	48	40	48	41	45	Low
Across	35	35	35	35	43	37	Low
Diagonal	38	38	38	38	38	38	Low
Rounded Average - As Found Conditions:						40	Low

Condition: Wet	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	33	34	30	29	31	31	Moderate
Across	31	31	30	31	32	31	Moderate
Diagonal	33	34	33	34	33	33	Moderate
Rounded Average - Wet Conditions:						32	Moderate

Key	36 +	Low Risk of Slip
	25 - 35	Moderate Risk of Slip
	0 - 24	High Risk of Slip

Comments and Observations

Some cracked tiling

Pendulum/Slip Alert Test Sheet 02

Date 5 June 2015

Site ACME Shopping Centre

Contract XXX

Customer Mr C Manager

Operator BB

Location Outside Shop 02

Location 2 of 8

Surface Marble - cleaned

Data/Readings for a test distance of a minimum of 60cm with a 4S Rubber Slider

Condition: As Found	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	52	52	49	49	53	51	Low
Across	52	49	49	50	52	50	Low
Diagonal	55	53	49	48	49	51	Low
Rounded Average - As Found Conditions:						51	Low

Condition: Wet	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	34	28	21	26	27	27	Moderate
Across	34	33	33	33	33	33	Moderate
Diagonal	31	33	33	32	32	32	Moderate
Rounded Average - Wet Conditions:						31	Moderate

Key	36 +	Low Risk of Slip
	25 - 35	Moderate Risk of Slip
	0 - 24	High Risk of Slip

Comments and Observations

Clean, dry surface



Pendulum/Slip Alert Test Sheet 03

Date 5 June 2015

Site ACME Shopping Centre

Contract XXX

Customer Mr C Manager

Operator BB

Location Inside Entrance 01

Location 3 of 8

Surface Ceramic Tile

Data/Readings for a test distance of a minimum of 60cm with a 4S Rubber Slider

Condition: As Found	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	52	60	56	56	55	56	Low
Across	56	50	52	49	50	52	Low
Diagonal	49	47	49	48	47	48	Low
Rounded Average - As Found Conditions:						52	Low

Condition: Wet	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	19	20	19	19	19	19	High
Across	20	20	19	19	21	20	High
Diagonal	19	19	21	19	19	19	High
Rounded Average - Wet Conditions:						19	High

Key	36 +	Low Risk of Slip
	25 - 35	Moderate Risk of Slip
	0 - 24	High Risk of Slip

Comments and Observations

This area is prone to ingress of water on rainy days. Extra temporary matting is recommended if necessary

Pendulum/Slip Alert Test Sheet 04

Date 5 June 2015

Site ACME Shopping Centre

Contract XXX

Customer Mr C Manager

Operator BB

Location Inside Entrance 02

Location 4 of 8

Surface Terrazzo - cleaned

Data/Readings for a test distance of a minimum of 60cm with a 4S Rubber Slider

Condition: As Found	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	52	48	50	49	48	49	Low
Across	50	47	-27	49	50	34	Moderate
Diagonal	52	48	50	49	50	50	Low
Rounded Average - As Found Conditions:						44	Low

Condition: Wet	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	31	31	31	31	31	31	Moderate
Across	29	27	30	31	29	29	Moderate
Diagonal	27	29	28	27	29	28	Moderate
Rounded Average - Wet Conditions:						29	Moderate

Key	36 +	Low Risk of Slip
	25 - 35	Moderate Risk of Slip
	0 - 24	High Risk of Slip

Comments and Observations

Both permanent and temporary matting installed - good water ingress prevention

Pendulum/Slip Alert Test Sheet 05

Date 5 June 2015

Site ACME Shopping Centre

Contract XXX

Customer Mr C Manager

Operator BB

Location Top of Elevator 01

Location 5 of 8

Surface Terrazzo - uncleaned

Data/Readings for a test distance of a minimum of 60cm with a 4S Rubber Slider

Condition: As Found	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	48	44	49	48	44	47	Low
Across	49	44	43	46	44	45	Low
Diagonal	46	42	42	43	42	43	Low
Rounded Average - As Found Conditions:						45	Low

Condition: Wet	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	32	30	25	29	25	28	Moderate
Across	32	36	31	34	30	33	Moderate
Diagonal	31	33	29	31	30	31	Moderate
Rounded Average - Wet Conditions:						31	Moderate

Key	36 +	Low Risk of Slip
	25 - 35	Moderate Risk of Slip
	0 - 24	High Risk of Slip

Comments and Observations

A slight build-up of dust was noticeable in this area

Pendulum/Slip Alert Test Sheet 06

Date 5 June 2015

Site ACME Shopping Centre

Contract XXX

Customer Mr C Manager

Operator BB

Location Top of Elevator 02

Location 6 of 8

Surface Terrazzo - cleaned

Data/Readings for a test distance of a minimum of 60cm with a 4S Rubber Slider

Condition: As Found	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	52	52	50	49	52	51	Low
Across	48	49	48	49	48	48	Low
Diagonal	47	48	49	48	47	48	Low
Rounded Average - As Found Conditions:						49	Low

Condition: Wet	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	35	30	29	29	29	31	Moderate
Across	34	32	32	31	30	32	Moderate
Diagonal	31	31	31	32	31	31	Moderate
Rounded Average - Wet Conditions:						31	Moderate

Key	36 +	Low Risk of Slip
	25 - 35	Moderate Risk of Slip
	0 - 24	High Risk of Slip

Comments and Observations

Clean, dry surface

Pendulum/Slip Alert Test Sheet 07

Date 5 June 2015

Site ACME Shopping Centre

Contract XXX

Customer Mr C Manager

Operator BB

Location Top of Stairs 01

Location 7 of 8

Surface Marble - uncleaned

Data/Readings for a test distance of a minimum of 60cm with a 4S Rubber Slider

Condition: As Found	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	52	52	50	49	52	51	Low
Across	48	49	48	49	48	48	Low
Diagonal	53	50	41	41	47	46	Low
Rounded Average - As Found Conditions:						48	Low

Condition: Wet	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	35	30	29	29	29	31	Moderate
Across	34	32	32	31	30	32	Moderate
Diagonal	27	27	28	27	24	27	Moderate
Rounded Average - Wet Conditions:						30	Moderate

Key	36 +	Low Risk of Slip
	25 - 35	Moderate Risk of Slip
	0 - 24	High Risk of Slip

Comments and Observations

Slight build-up of grease in this area

Pendulum/Slip Alert Test Sheet 08

Date 5 June 2015

Site ACME Shopping Centre

Contract XXX

Customer Mr C Manager

Operator BB

Location Bottom of Stairs 01

Location 8 of 8

Surface Marble - uncleaned

Data/Readings for a test distance of a minimum of 60cm with a 4S Rubber Slider

Condition: As Found	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	52	52	50	49	52	51	Low
Across	48	49	48	49	48	48	Low
Diagonal	47	48	49	48	47	48	Low
Rounded Average - As Found Conditions:						49	Low

Condition: Wet	Test 1	Test 2	Test 3	Test 4	Test 5	Average	Risk
Along	36	42	43	44	43	42	Low
Across	34	32	32	31	30	32	Moderate
Diagonal	31	31	31	32	31	31	Moderate
Rounded Average - Wet Conditions:						35	Moderate

Key	36 +	Low Risk of Slip
	25 - 35	Moderate Risk of Slip
	0 - 24	High Risk of Slip

Comments and Observations

Exvidence of wear and tear on the tiling at the foot of the stairs

Test Method

Pendulum

The HSE on the Pendulum:

“Research has confirmed the Pendulum to be a reliable and accurate test, leading to its adoptions as the standard HSE test method for the assessment of floor slipperiness in dry and contaminated conditions”

Pendulum testers at SlipTest Ltd are operated and calibrated according to British Standard BSEN 13036-4: 2011.

The pendulum was originally designed in the 1940s to simulate the action of a slipping foot.

The method is based on a swinging imitation heel (using a standardised rubber sole), which sweeps over a set area of flooring. Each sweep of the simulated heel is carefully controlled and measured by a skilled technician. The pendulum measures the resistance, and thus the coefficient of friction, between the simulated heel and the floor surface.

Measurements are taken in both “as found” and wet conditions using tap water.

The combination of a standard rubber sole and an exact method of testing produces consistent test results, which give an accurate indication of the slipperiness of floor surfaces in situ.



Test Method

SlipAlert

The HSE on SlipAlert:

“When operated correctly, the SlipAlert test produces valid results and is a useful tool for obtaining a simple measure of Coefficient of Friction risk assessment and monitoring of floor surfaces and cleaning regimes.”

The Method:

SlipAlert is designed to behave in the same way as the heel of a shoe as it slips across the floor. The weight, size and speed of the SlipAlert machine are all carefully calibrated to combine together to simulate the movement of a heel passing across the surface.

The simple operation of the SlipAlert ensures the accuracy of its test results. The operator positions the machine at the top of the ramp and allows it to run down and roll across the floor. The 'slider' (simulated heel) drags across the floor and the distance travelled is recorded.

That distance reading is converted into a standard measurement of slip resistance - the Pendulum Test Value (PTV).

Measurements are taken in both “as found” and wet conditions using tap water.

The combination of a standard rubber heel and a standard speed off the ramp results in consistent test results, which can be used to obtain an accurate measure of the slipperiness of flooring in situ.



Test Method

Surtronic Duo Roughness Tester

The HSE on the Roughness Tester:

“Research has shown that the Rz roughness parameter gives a good indication of floor slipperiness in water-contaminated conditions”

The Method:

The Surtronic Duo Roughness Tester measures how rough the surface of a floor is. A diamond stylus is drawn across the floor and the height and depth of the microscopic peaks and valleys of the surface are recorded.

To have a low slip potential when wet, a floor needs to be ‘rough’ enough for the pedestrian’s heel to break through the water and make direct ‘solid-to-solid’ contact with the peaks in the floor surface. The thicker the potential contaminant, the rougher the floor has to be to prevent slipping.

Measurements are taken in “as found” conditions.

Wherever possible, roughness measurements should be used in conjunction with Pendulum or SlipAlert slip resistance tests and in the context of the Health and Safety Executive Slip Assessment (SAT). A roughness reading on its own is rarely a good indicator of floor safety.





Test Method

The Health and Safety Executive SAT Test

What is the HSE SAT Test?

"The Slips Assessment Tool (SAT) is a computer software package that allows an operator to assess the slip potential of pedestrian walkway surfaces"

The Method:

The HSE SAT is used by SlipTest Ltd to collect information about the floor surface that is tested and the environment surrounding it. The standard template for data collection ensures consistency of information from one test to another.

Numerous factors that affect the likelihood of a pedestrian slip are considered by the system, such as the floor cleaning regime, the presence of contamination on the floor surface and the pedestrian use of the area. The SAT Test also incorporates the roughness readings produced by the Surtronic Duo roughness tester. All the information is weighted, simply processed in accordance with HSE HSE guidelines, and presented as a single figure. The scale used is arbitrary, and does not directly represent the frictional properties of the flooring; however it provides a useful guide to the safety of the flooring within its environment.

As a guide, a SAT Test value of zero represents a low slip risk and a value over 40 represents a high slip risk.

SlipTest Ltd only uses the HSE SAT Test in conjunction with a Pendulum or SlipAlert slip resistance test in order to gather as much information as possible about the floor surface, before assessing the risk of slipping.





Floor Safety Testing and Slip Resistance

British Standards and Legal Framework

British Standards

1. BS 1134-1
Method for the assessment of surface texture - Part 1:
Method and implementation
2. BSEN 13036-4
2011 – Pendulum Testers
Specification
Method of operation
Method of calibration
3. BS 8204-6
2001+A1:2010 – Screeds, bases and in situ floorings. Synthetic resin floorings.
Code of practice

Legal Framework

1. The Health and Safety at Work etc. Act 1974 Section 2(2)(d)
2. The Workplace (Health, Safety and Welfare) Regulations 1992
Regulation 12(2)(a)
3. The Assessment of Floor Slip Resistance – Issue 4
United Kingdom Slip Resistance Group 2011

Disclaimer

No responsibility for loss or injury occasioned as a result of any person acting or refraining to act as a result of this report, the test results therein or the adjoining documentation will be accepted by SlipTest Ltd.



Why do you need regular floor testing?

1. Duty of Care

As a public access space you have a legal duty to ensure that you have taken all reasonable measures to ensure the safety and well-being of the members of the public who walk on your floors.

2. Reduced Compensation Claims for Slips and Trips

Spurious claimants are much less likely to pursue claims, when they realise that you have a regular certificated floor safety testing programme.

3. Lower Insurance Premiums

The majority of insurance companies will discount their insurance premiums for public liability if they know that you have a routine floor safety test programme.

4. Early Warning of Floor Degradation

Your regular tests will highlight any gradual degradation of your floor surfaces, giving you more time to plan for refurbishment or replacement work.

5. Peace of Mind

The SlipTest Ltd routine test is the most comprehensive in the industry. You can be secure in the knowledge that you are discharging your legal duty of care by regularly assessing the slip potential of your flooring.