SLIP RESISTANCE ASSESSMENT TEST FOR:

Centrecoat – Centrecoat MMA Road Line Report
No: SS-RBP140514

Client: Centrecoat

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CONDITIONS OF ISSUE OF REPORT

Our slip assessment testing is undertaken with due care and accuracy. The attached results are given in good faith and we believe these results to be an accurate assessment of the sample tested on the date of testing. Reported test results in no way imply that the flooring material under test is approved or endorsed by Surefoot Systems UK Ltd. Surefoot Systems UK Ltd also 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.

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FURTHER INFORMATION

Requests for further additional information on the subject of this report or other queries should be addressed to:
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REFERENCES

1. United Kingdom Slip Resistance Group 2011, The Measurement of Floor Slip Resistance Guidelines Recommended by the UK Slip Resistance Group Issue 4

2. BS 7976 – 2 2013: Pendulum testers part 2: Method of operation

3. Pie, PW Harrison, H.W 2003, BRE Building Elements: Floors and Flooring – performance, diagnosis, maintenance, repair and the avoidance of defects. BRE report 460, 2003

4. Harper, F.C, Warlow, W.J and Clarke, B.I 1961, The forces applied to the floor by the foot in walking. National Building Studies Research Paper 32, Building Research Station , Her Majesty's Stationery Office, London, England

5. Greater London Council 1971. Slip resistance of floors stairs and paving's GLC Department of Architecture and Civic Design, Bulletin No 43 (2nd Series) March 1971

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1. INTRODUCTION

Surefoot Systems UK Ltd was instructed by Centrecoat Ltd to carry out slip assessment testing of a cured sample of Centrecoat MMA Road Line that is manufactured by Centrecoat.

2. PENDULUM TEST METHOD – BS7976-2:2013

In order to assess the slip resistance of the floors in question tests were undertaken using a portable Wessex TRL Pendulum slip tester. The tests were carried out in accordance with UK Slip Resistance Group (UKSRG) Guidelines issue (4.0 2011) and BS 7976 – 2 2013 as recommended by the UK Health & Safety Executive. Measurements of the floors surface Pendulum Test Value (PTV) which is closely related to the coefficient of dynamic friction were measured using a fully calibrated Wessex Pendulum machine. Testing was carried using the slider 96 developed to replicate a shoe soul with moderate slip resistance in dry & wet conditions.

Pendulum testing is a method that models the formation of a hydrodynamic squeeze film between the floor and shoe sole, a major factor in wet slip accidents. The test operates by the pendulum arm being raised to the horizontal position and clamped. The arm is then released by the operator and the arm then swings freely driving a pointer around the graduated scale and the retardation of the pendulum arm as it moves across the surface is recorded. The recorded value is representative of the resistance due to friction of the floor covering against the moving pendulum. This simulates the walking action of a person over the surface.

3. United Kingdom Slip Resistance Guidelines

The UKSRG classification of slip potential is based on research undertaken by the UK Building Research Establishment (BRE) The level of friction required by a person to walk without slipping is related to the speed of movement and the step length. The level of friction required also varies from person to person, where persons required level of coefficient of friction is greater than that available from the interaction of the shoe soul, flooring material and any contamination the person will experience a slip accident. The classifications arriving from the BRE study apply to basic conditions e.g. for low activity normal walking environments. Activities such as rushing pulling pushing or turning in any environment are likely to require a higher level of friction than normal walking. Some individuals will experience minor slips from which they can recover their balance without a fall occurring so every slip does not result in a fall accident.

4. Control Measure to Prevent Slips

Where reasonably practical control measures outlined in the HSE guidelines (http://www.hsegov.uk/slips/employersriskas.htm) should be used to control the risk of slips. Attention should therefore be paid to the minimisation of floor contamination before any action is taken to modify or replace the floor surface material or substrate. However the level of contamination required to increase the risk of slips is considered to be minimal. Therefore floors know to be slippery when contaminated must be kept thoroughly clean and dry to maintain satisfactory slip resistance. Where this is not possible consideration should be given to floor surface modification or replacement,

5. TEST EQUIPMENT

Wessex Portable Pendulum Skid Tester

Serial Number:	SK1673
Calibrated By:	Knightcott Surface Solutions
Calibration Date:	18.03.2014
Certificate Number:	CN165
Calibration Due	17.03.2015

Notes: Calibration checks are carried out regularly in house using float glass Pavigres tile and lapping film. In addition an annual calibration is undertaken by an independent UKAS accredited organisation as per BS 7976-3.

Daily Calibration Test Values
Date: 14.05.14 (96Slider)

	PTV					Mean	Expected
Lapping Film	61	61	60	61	62	61	59-64
Float Glass	10	10	10	10	10	10	5-10
Pavigres Tile	33	33	32	33	33	33	32-36

6. RESULTS OF SLIP TESTS – Centrecoat

Date Tested: 14.05.14
Equipment Used: Portable Wessex Pendulum Slip Assessment Tester "(96" Slider)
Equipment ID No: SK1673
Calibration No: CN 89
Calibration Date: 15.03.13
Expiry Date: 14.03.14
Calibration Company: Knightcott Surface Solutions

FLOORING SAMPLE	DRY PTV	WET PTV
Centrecoat MMA Road Line	75	60

7. COMMENTS

The sample tested recorded a typical PTV or Pendulum test Value of 75 in the dry test using the "96" slider (common shoe soul). This equates to a slip risk potential of "Low Risk"

When testing the sample in wet conditions using the same slider the test recorded a typical PTV of 60. This equates to a slip risk potential in wet conditions of "Low Risk"

8. Guidelines

The Assessment of Floor Slip Resistance
The United Kingdom Slip Resistance Group Guidelines
Issue 4.0, September 2011

The criteria for judging the results of slip resistance tests are based on the work of the Building Research Station (now known as the BRE) in the 1960s supported by the experience of investigators and bodies such as the former Greater London Council over the last 40 years. This work suggested that for unencumbered, able bodied, working aged people, a PTV of 36 or above represented an acceptably low risk of slipping when walking in a straight line on a level surface.

Table 1: Slip potential classifications for PTV

PTV	Slip Potential
0- 24	High Risk
25 - 35	Moderate Risk
36+	Low Risk

Table 2: Predictions of friction requirements for pedestrians for level walking made by BRE

Risk 1 in :	Minimum PTV	Slip Potential
1,000,000	36	Low
100.000	34	Moderate
10,000	29	Moderate
200	27	Moderate
20	24	High
2	19	High