

# Composite Floor Pedestrian Slip Risk Assessment

## Introduction

A sample of the flooring material was tested using a standard Pendulum Slip Tester to determine slip resistance. This report briefly details the findings.

## Apparatus & Test Procedure

A standard Wessex Pendulum slip tester was used (figure 1). Four-S Pedestrian hard rubber slider (recently renamed sample 95 and obtained from RAPRA) was used. This type of rubber is used to replicate a standard shoe material.

The floor sample was placed in two orientations with respect to the slider; with the direction of motion parallel and perpendicular to the lay of the surface. Pendulum slip resistance values PTV (also known as slip resistance values SRV) were recorded five times for each orientation both wet and dry.

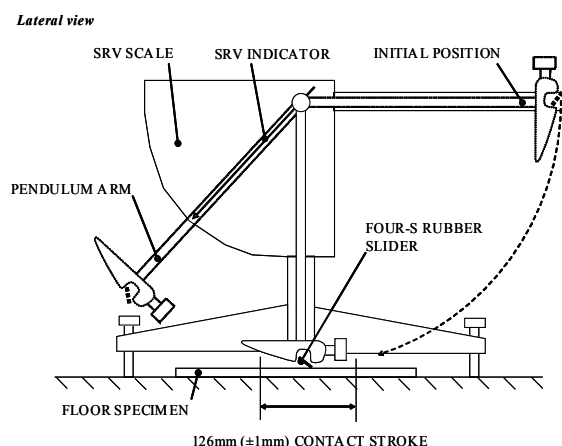


Figure 1. Schematic of the Wessex Pendulum Tester

All tests were carried out in accordance with HSL and UK Slip Resistance Group Guidelines 2005, and British Standard BS 7976:1-3.

## Results

The results are presented in table 1. Table 2 shows the slip resistance guidelines currently in use by the HSE.

Pendulum Test Value, PTV			
Dry		Wet	
Perpendicular to lay	Parallel to lay	Perpendicular to lay	Parallel to lay
48.5	39	40	34

50	37.5	40	32
50	38	40	33
48	38	40	32
48	38	38	31
Av 48.9	Av 38.1	Av 39.6	Av 32.4

Table 1. Test data for composite floor surface tested wet and dry and parallel and perpendicular to the lay.

Risk	PTV
high	<24
moderate	25-35
low	>36

Table 2. HSL Guidelines for slip resistance

The PTV's of the four cases above correspond to coefficients of friction of 0.52, 0.39, 0.41, and 0.32 respectively.

### Conclusion

In all cases the flooring, as tested, provides an acceptable slip resistance.

The slip resistance risk of the flooring is classified low for all cases under dry conditions. Under wet conditions when the slip direction is parallel to the lay the risk is elevated slightly to moderate.

### Recommendations

In the direction perpendicular to the lay the slip resistance is slightly higher. It is probable that some interlocking takes place and slip resistance is enhanced.

A slight improvement in slip resistance in the perpendicular direction might be achieved by using a criss-cross texture (but still retaining the same roughness).

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