

SLIPSAFETY

SERVICES

Delivering expert floorcare

Example Slip Safety Survey – shopping centre



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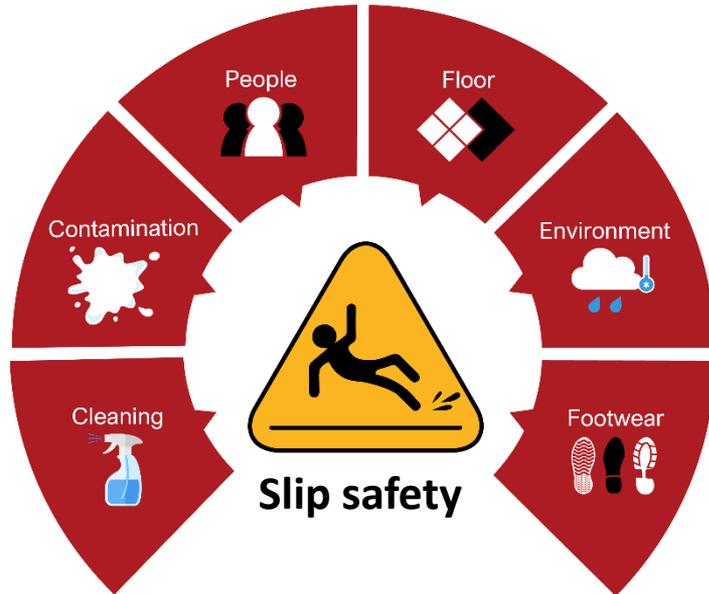


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Six Sources of Slips

There are Six Sources of Slip Safety, namely:



When reviewing the causation of an accident, all these factors should be considered.

Some factors are, necessarily, less relevant than others. For example an operator of restaurants is able – through a PPE policy – to control the footwear its staff wear in a kitchen, but it cannot control the footwear worn by customers in front-of-house areas.

Slip testing allows us to quantify the performance of the floor surface (and the contamination present and cleaning thereof).

Explaining the pendulum test

The Pendulum is the officially- recognised method for quantifying slip resistance by the Health & Safety Executive (HSE) and the UK Slip Resistance Group (UKSRG).

The UKSRG, of which HSE is a member, publishes the UK Slip Resistance Group Guidelines, which explain how one should measure and assess slip risk.

The Pendulum is designed to determine the dynamic coefficient of friction.

A spring-loaded foot fitted with either a 96 (hard rubber) or 55 (soft rubber) slider is attached to a pendulum arm of a specified length.

The choice of rubber slider is normally determined by the type of environment, the type of footwear (i.e. trainers or normal

normal shoes) and whether a barefoot situation exists. In general terms, slider 96 mimics shod foot traffic; slider 55 mimics barefoot traffic.

The pendulum arm is released, bringing the rubber slider into contact with the floor surface and a Pendulum Test Value (as indicated by the pointer) is established.

This method of determining the slip data is in accordance with BS 7976 as well as the UKSRG Guidelines.

Both the Pendulum and the rubber slides used must be calibrated and prepared in accordance with the UKSRG Guidelines in order to produce a valid test result.

Interpreting the pendulum test

The Pendulum produces a Pendulum Test value (PTV) which is 100x the co-efficient of friction (therefore a PTV of 20 is recording a co-efficient of friction of 0.2).

HSE gives three categories of risk for PTV scores in wet and dry conditions:

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

Dry and wet readings are taken and the results interpreted in the exact same way, though more often than not there is a significant different in PTV results between dry and wet conditions.

You can also correlate PTV to accident risk exposure:

PTV	Risk
19	1 in 2
24	1 in 20
27	1 in 200
29	1 in 10,000
34	1 in 100,000
36	1 in 1,000,000

You will note that the accident risk decreases exponentially as the PTV increases.

Results:

Area	Floor condition	PTV	Slip potential	Comments
Cathedral entrance	As found, dry	54	Low	We understand this is a new floor. In wet conditions it provides poor slip resistance, although it has a texture. It may be that it was sealed which has inhibited its slip resistance (the anti-slip treatment trialled would tend to achieve a higher result than here).
	As found, wet	17	High	
	After deep clean, wet	19	High	
	After anti-slip treatment, wet	28	Moderate	
Washroom lobby	As found, dry	69	Low	We understand this is a new floor. Whilst it may look to the naked eye like an anti-slip finish, in fact it is a fairly smooth LVT which gives high slip potential when wet. Given this is a foreseeably wet environment, this is not ideal.
	As found, wet	16	High	
	After deep clean, wet	20	High	
Mall flooring, rectangular brick	As found, dry	68	Low	Even when thoroughly cleaned this floor type only gives high slip potential. In environments where it is more likely to become wet, a surface treatment should be considered.
	As found, wet	18	High	
	After deep clean, wet	20	High	
Mall flooring, square tile	As found, dry	66	Low	As the predominant floor in the centre, to achieve a moderate slip potential when wet is pretty good. It may be that closer to entrances and on ramps a higher wet slip resistance is sought.
	As found, wet	27	Moderate	
	After deep clean, wet	31	Moderate	

Overall feedback in the context of the Six Sources of Slip Safety

Source	Comments
Floor	<ul style="list-style-type: none">▪ There are a variety of floor surfaces▪ It would be possible to improve the inherent slip resistance of these floors through anti-slip treatments in environments where it is more likely to become wet (e.g. entrances, washrooms)
Cleaning	<ul style="list-style-type: none">▪ Overall the floors are well-maintained▪ The Cathedral entrance tiles would benefit from a deep clean
Contamination	<ul style="list-style-type: none">▪ 90% of the floors are subject solely to foot traffic or spillage contamination and are unlikely to be routinely wet▪ A zonal approach would be therefore reasonable and practicable e.g. concentrate on more foreseeably wet environments such as toilets, entrances
Environment	<ul style="list-style-type: none">▪ There are few slopes that are likely to get wet, lighting is good and generally the environment is fine▪ Entrance matting is mixed. Given this, looking at improving the floor would be beneficial at the car park entrance
People	<ul style="list-style-type: none">▪ Correct use of signage could help to reduce accident frequency
Footwear	<ul style="list-style-type: none">▪ Owner, managing agent and cleaning company staff (plus staff of tenants) could control their footwear and reduce the risk of slips▪ However, it is not possible to control the footwear worn by the public

Recommendations

The tiles at the **Cathedral entrance** should receive a deep clean and anti-slip treatment

At the **car park entrance** an anti-slip treatment to the first approx. 5 linear metres beyond the matting is recommended

In the **washrooms**, an anti-slip treatment is recommended to increase the wet slip resistance to PTV36+

On the **main mall** surfaces, no immediate action is recommended. The effect of cleaning over time should be monitored

An annual slip safety survey would be invaluable evidence in the event of any personal injury insurance claims

