On-site slip testing of floor surfaces

Testing for possible slip on flooring is a key way to lessen the risk of injury and resulting legal action.

In one recent year, there were almost 22,000 slip- and trip-related injuries in the UK alone as reported under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR). This represents 31 per cent of the total number of reported non-fatal injuries in the workplace.

Floor safety management is obligatory in health and safety regulations and an integral part of sound overall business practice. It is important to understand the performance of a floor surface in terms of slip resistance. The SATRA on-site assessment service employs a widely accepted method of measuring slip.

This method (BS 7976-2:2002+A1:2013) uses a machine which operates with a swinging pendulum (figure 1) and indicates the friction between the floor surface and a rubber slider attached to the foot of the pendulum (figure 2). The device is designed for assessing hard, smooth surfaces under wet and dry conditions. The results obtained are 'pendulum test values' (PTV) – see table 1. SATRA can also measure the micro-roughness of the floor surface, however, surface roughness should only be used as a guide, and needs to be considered alongside pendulum results.

The key to slip accident prevention is a systematic and careful examination of factors that could cause harm to people, and an evaluation of whether the controls in place are sufficient to prevent harm. By applying a total floor safety management approach, the SATRA on-site assessment team can offer expert consultation and advice on safety maintenance and continual improvement.

Keeping the public safe

SATRA has experience of testing floor surfaces in a variety of locations, including where the public has access and, therefore, could be at risk. Typical premises where the risks are significant include railway stations, underground rail platforms, bus stations, airports, hospitals, medical centres, schools and shopping centres. This is because these premises have large numbers of unsupervised people passing through them and floors may be contaminated by substances such as water, oil, foodstuffs, spilled drinks or other fluids.

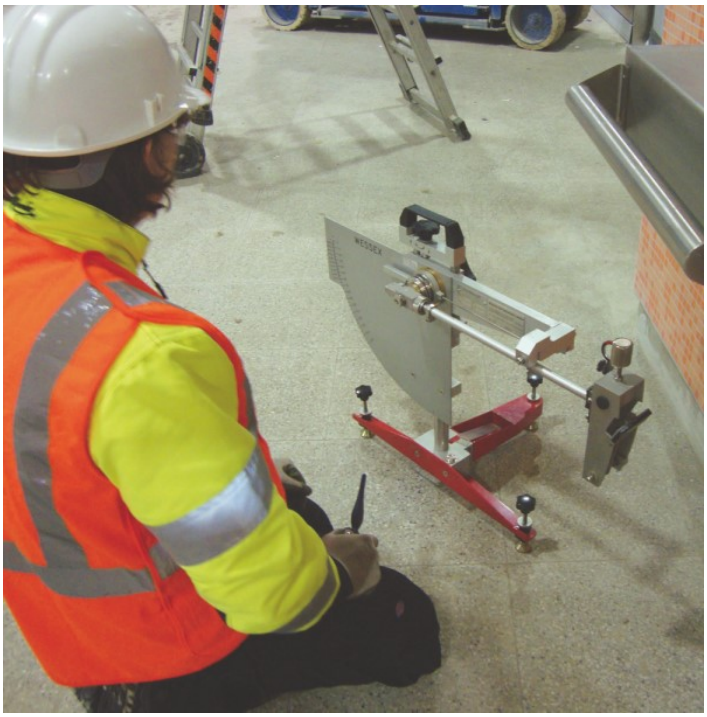

Figure 1: SATRA uses a machine with a swinging pendulum to measure floor surface resistance against BS 7976-2:2002+A1:2013

The measurement taken in a slip test is a method of gauging only how the floor will behave with a standardised shoe sole under the test conditions. To better understand the requirements of the floor in practice, a full site analysis should be conducted. At SATRA, we employ a series of assessments to ascertain the potential for slip under different conditions. To do this, we identify the key factors that may influence the interaction between the user, the user's footwear and the floor.

The slip potential approach recognises that a number of factors contribute to the potential for pedestrian slip accidents – it is not sufficient to consider one or two factors in isolation. By understanding the inter-relationship and the relevance of each component in a particular circumstance, an holistic assessment of the slip potential may be made. The model looks at factors which are controllable, those which are predictable, and those factors that are both controllable and predictable.

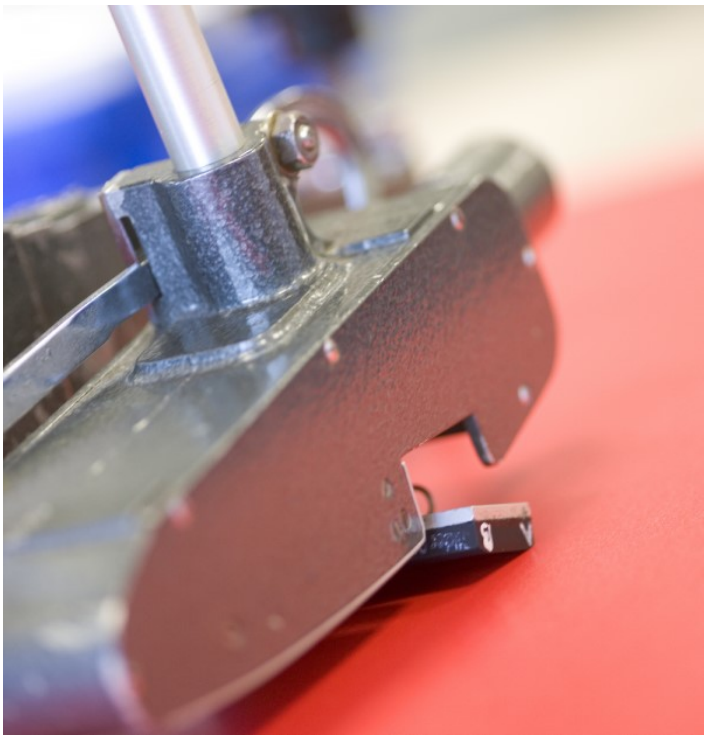

Figure 2: Friction is measured between the floor surface and a rubber slider attached to the foot of the pendulum

SATRA employs a team of assessors who visit premises and carry out full analyses of floor surfaces. This brings reassurance for the operators of the buildings and can prove useful evidence of due diligence prior to a building being put into use.

SATRA is a world-leading research and testing organisation for ensuring the fitness-for-purpose of a wide range or products and materials, including floorings for use in private and public buildings.

Those responsible for the safety of others in buildings and premises should consider the potential risks when people could slip on the floors. Testing floors may be a useful way of demonstrating that floors are safe. Alternatively, testing floors may demonstrate the need for a change in cleaning practices to reduce slip and potential hazards.

Table 1: Slip potential classification, based on pendulum test values (PVT)

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

How can we help?

15 PER CENT DISCOUNT ON FIRST SATRA TEST - please click here.

For further information on SATRA's total floor management package and unrivalled slip testing service, please email floorcoverings@satra.com or visit SATRA's slip research and testing page.