

Ramp test for floorcoverings

by John Shipman
Floorcoverings



The ramp test method of measuring slip resistance is ideal for comparative testing of floorcovering materials.

SATRA has several ways of measuring the slip resistance of flooring materials and floorcoverings. Recently added to the SATRA laboratories is another test machine which is gaining recognition by a large number of flooring customers across Europe. The purpose-built SATRA ramp test machine fully conforms to several standards and test methods – see Box 1. Currently these standards do not form part of the requirements for CE marking of floorcoverings. The existing DIN standards will be withdrawn once the new EN standards are published.

The ramp test machine offers testing facilities for dry, wet and contaminated floor surfaces. Built in SATRA's own engineering facilities, it incorporates a ramp which is 0.65m wide and 2m long. The fully adjustable ramp has a digital readout to indicate the angle of the ramp during the test. There is the facility to contaminate the flooring undergoing testing with three different liquids and to collect and dispose of the liquid. A safety system protects the operator against falling during the test.

Floorcoverings are tested by fitting them to the surface of the ramp. An operator then

moves or walks forwards and backwards, in the manner specified in the test method, whilst simultaneously tilting the table at a set speed, using a remote controller. During the tilting process the operator cannot see the readout which depicts the angle of the table. When slip occurs and the operator loses his or her grip on the floorcovering, a reading of the inclined angle is taken. The operator uses special footwear with a specified soling material during each test, to prevent the footwear from being a variable factor in the experiment. The operator's safety is assured by wearing a safety harness attached to an overhead gantry. Consistency of the operator is checked at intervals using specially made calibration floor plates.

This ramp method of measuring slip resistance allows SATRA to offer an important service to clients across Europe. The ramp test machine and associated test methods are ideal for comparative testing, to judge the performance of two or more floorcovering materials. SATRA expects that the machine will be in high demand by companies supplying floorcoverings and wanting to demonstrate that their products meet the expectations of the users or operators of buildings.

Box 1: The SATRA ramp test machine fully conforms to the standards and test methods listed below.

DIN 51097:1992 Determination of anti-slip properties; wet loaded barefoot areas; walking method; ramp test

DIN 51130:1992 Testing of floorcoverings; determination of slip resistance; workrooms and areas of work with an increased risk of slipping; walking method; ramp test

EN 13845 Polyvinyl chloride floorcoverings with particle based enhanced slip resistance

prEN 15673-1 is a draft method being prepared by CEN/TC 339 - determination of slip resistance of pedestrian surfaces - Part 1: Reference method

BSEN13552 (draft) Ceramic tiles - determination of coefficient of friction

How can SATRA help?

For more information on how the ramp test can be used to your advantage or for information on the CE marking of floorcoverings please consult Steve Ferry stevfef@satra.co.uk