

Test principle
Determination of the non-slip characteristics
GS-IFA-B01

DGUV Test

Principles for testing and certification of the non-slip characteristics of floor surfacing

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**Deutsche Gesetzliche
Unfallversicherung e.V. (DGUV)**

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1 Scope

Test specimens submitted to the test body are tested by means of methods which are standardized or for which standardization is envisaged. The test specimen is tested on the basis of defined and published assessment metrics (requirements).

Test methods are described and assessment metrics defined for floor surfacings in:

- a) BGR 181, issued October 1993, updated October 2003 – Fußböden in Arbeitsräumen und Arbeitsbereichen mit Rutschgefahr; available from Carl Heymanns Verlag KG, Luxemburger Strasse 449, D-50939 Köln
- b) DIN 51 130 Testing of floor coverings – Determination of the anti-slip properties – Workrooms and fields of activities with slip danger, walking method – Ramp test; available from Beuth Verlag GmbH, D-10772 Berlin.

BGR 181 and DIN 51 130 describe a test method (the walking method) by which the anti-slip properties of floor surfacings for workrooms and areas of activity presenting a slipping hazard can be identified and assessed.

BGR 181 assigns floor surfacings to the assessment groups R9 to R13, according to the level of their anti-slip properties. Floor surfacings in assessment group R9 have the lowest anti-slip properties, those in R13 the highest.

Type examination

Only the floor surfacing manufacturer or importer is entitled to apply for a type examination.

Providing the floor surfacing passes the type examination, a test certificate is issued. If desired and requested, a BG test certificate, which authorizes use of the DGUV-Test mark, may be issued together with confirmation of the successful test result. If use of the BG-PRÜFZERT mark is authorized, the form of marking must be agreed with the BGIA, and a sample of the mark submitted for approval.

Certificates indicating that the specimen has passed the test are limited in their validity to five years.

Individual tests

Should a manufacturer desire an orientation test, e.g. during the development phase, he may apply for an individual test.

Treatments or coatings which are applied to a finished floor surface for retrospective improvement of its anti-slip properties can be subjected only to an individual test.

The applicant receives a test report on the attained incline value.

2 Launching of the test procedure

Application for the test must be submitted in writing. An application form for the relevant test provided for by the test body for the relevant test, and can be downloaded from the Internet at www.dguv.de/ifa, Prüfung/Zertifizierung, "Formulare". The form may be copied.

Before the test can be performed and a test certificate issued, the applicant must provide detailed information on the structure and composition of the floor surfacing to be tested, by which it can be identified. In addition, a description of the structure of the product's walking surface is also required, with details for example of the type, size and quantity per unit area of the gripping substances employed or the type and means of finishing of the surface for attainment of a gripping structure.

For surfacings which are fabricated only at the site of installation, detailed information must be provided in the form of instructions for installation. The instructions may also subsequently form part of the test certificate.

Floor surfacings are considered to be of identical type when their structure (composition, surface, etc.) is identical in terms of its relevance to the anti-slip properties. Use of a single type designation for products of different dimensions is permissible. Floor surfacings consisting of identical materials and differing only in geometry and dimensions may for example be grouped under a single type designation. In this case, however, type testing applies to all variants with regard to the safety properties which bear the type designation concerned. Should the safety-related structure of a massproduced product be modified, the type designation must also be changed. A test certificate issued in respect of this mass-produced product then ceases to be valid.

Test specimens required

Testing of the anti-slip characteristics

The floor surfacings to be tested must be manufactured either as self-contained, distortion-free test specimens with a smooth underside, or be affixed to smooth panels of load-bearing, distortion-free material. The dimensions of the test specimens must be approximately 100 cm x 50 cm. The surface to be tested must be clearly identifiable as such or be clearly marked.

Section 5.1 of DIN 51 130 must be observed during fabrication of the test specimen.

Should the test specimen be fabricated by the test body, the latter requires approximately 0.7 m² of the floor surfacing to be tested.

Where test surfacing are fabricated only at the site of installation itself (e.g. industrial floorings, plastic floor surfacing), the specimens must be fabricated by the applicant. Section 5.1.4 of DIN 51 130 must be observed in this case.

Where specimens feature directional profiles, test specimens in two perpendicular directions are required.

Testing of the spill displacement volume

For testing of the spill displacement volume, five test specimens with the dimensions (10 + 0.1) x (10 + 0.1) cm must be submitted for testing. Section 6.3 of DIN 51 130 must be observed during fabrication of the test specimens.

The test body reserves the right to request further test specimens.

3 Retention of test specimens and test documentation

The tested floor surfacings are retained by the test body for documentation purposes for the duration of validity of the test certificate.

The test body reserves the right to destroy test specimens six weeks after the completion of testing (issuing of the test result). Return of the test specimens by the test body is not possible, even at the recipient's expense.

Documents supplied to the test body by the applicant for the purpose of performance of the test are retained by the test body as documentary material.

4 Test fees

The test fees levied by the IFA are based upon the applicable schedule of charges and the IFA's relevant hourly rate. Should the test principles or hourly rate be amended, the test fees will be adjusted accordingly. Attention is drawn to the general terms and conditions of the Federation of Institutions for Statutory Accident Insurance and Prevention (DGUV).

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