



IFA

Institut für Arbeitsschutz der
Deutschen Gesetzlichen Unfallversicherung
Prüf- und Zertifizierungsstelle im DGUV Test

Principles for testing and certification of the non-slip properties of floor coverings

Last amended 01.2016

Principles for testing and certification of
the non-slip properties of floor coverings

GS-IFA- B01

Institute for Occupational Safety and Health of the DGUV (IFA)
Testing and certification body at DGUV Test
Alte Heerstr. 111
53757 Sankt Augustin / Germany

GS-IFA-B01

Contents

1	Scope	3
2	Test principles	3
3	Material and territorial jurisdiction	4
4	Test and certification procedure	4
4.1	Initiation of the test procedure	4
4.2	Documents to be submitted	4
4.3	Offer and agreement	5
4.4	Test specimens required	5
4.5	Retention of test specimens and test documentation	6
4.6	Test certificates	6
5	Test fees	7
6	Validity	7

1 Scope

These principles apply to testing and certification of the non-slip properties of floor coverings. They include the rules and good engineering practice important for testing and certification, and supplement the "Rules of Procedure for Testing and Certification carried out by the Testing and Certification Bodies in DGUV Test" (BGG/GUV-G902, September 2010 issue).

Testing may take the form of:

- A type examination with issuing of a test certificate
- An individual test

2 Test principles

Test methods and assessment criteria for floor coverings are described and defined in

- DGUV Rule 108-003 (floor coverings in work premises and areas of activity presenting a risk of slipping)
- DIN 51130: Testing of floor coverings – Determination of the anti-slip property – Workrooms and fields of activities with slip danger, walking method – Ramp test
- BGI/GUV-1 8527 (floor coverings for wet barefoot areas)
- DIN 51097: Testing of floor coverings – Determination of the anti-slip properties – Wet-loaded barefoot areas – Walking method – Ramp test
- BGI/GUV-1 8687 (evaluation of the risk of slipping under operational conditions)
- DIN 51131: Testing of floor coverings – Determination of the anti-slip property – Method for measurement of the sliding friction coefficient

DGUV Rule 108-003 assigns floor coverings to the rating groups R9 to R13 according to the standard of their anti-slip properties. Floor coverings in rating group R9 have the poorest anti-slip properties, those in R13 the best.

BGI/GUV-1 8527 assigns floor coverings to the rating groups A, B or C according to the different slip hazards. Rating group A indicates the lowest requirements for slip resistance, C the highest.

BGI/GUV-1 8687 rates the slip resistance according to the coefficient of dynamic friction.

3 Material and territorial jurisdiction

Testing and certification are performed by the Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA), Testing and certification body at DGUV Test, Alte Heerstrasse 111, 53757 Sankt Augustin, Germany.

4 Test and certification procedure

Testing is conducted with reference to the "Rules of Procedure for Testing and Certification carried out by the Testing and Certification Bodies in DGUV Test" (BGG/GUV-G 902) and an agreement reached between the requesting party and the above test and certification body.

4.1 Initiation of the test procedure

The request for testing must be submitted in writing. Request forms for the desired test are provided by the test body, and can be downloaded from the Internet (www.dguv.de Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA), testing/certification, forms). The forms may be copied.

Only the manufacturer or importer of the floor covering may commission a type examination. Should a manufacturer desire an orientation test, for example during the design phase, he may request an individual test.

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

4.2 Documents to be submitted

Before the test can be performed and a test certificate issued, the requesting party must provide detailed documentation of the structure and composition of the floor covering to be tested, by which it can be identified. A description of the structure of the floor covering's walking surface is also required, including details for example of the type, size and quantity per unit area of the non-slip materials employed or the type and form of treatment of the surface used to attain a non-slip structure.

For floor coverings which are fabricated only at the site of installation, detailed information must also be submitted in the form of laying instructions. The instructions may also subsequently form part of the test certificate.

Floor coverings 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 coverings consisting of identical materials and differing only in their geometry and dimensions may for example be grouped under a single type designation. In this case however, the type examination applies to all variations in safety property bearing the type designation concerned. Should a standard product be modified with respect to the safety properties of its structure, the type designation must also be changed. A test certificate issued in respect of this standard product then ceases to be valid.

4.3 Offer and agreement

Following receipt of the request and the accompanying documents, the test and certification body presents the requesting party with an offer in accordance with the schedule of fees, together with the test agreement. Once the test agreement has been signed by both parties, the request for testing is deemed awarded and accepted.

4.4 Test specimens required

Testing of the anti-slip properties

The floor coverings to be tested must be either manufactured as self-supporting, warp-free test specimens with a plane underside, or affixed to plane panels of load-bearing, warp-free material. The dimensions of the test specimens must be approximately 100 cm × 50 cm. The surface to be tested must be clearly identifiable as such or be clearly marked.

The test specimen must be fabricated in compliance with Section 5.1.4 of DIN 51130/Section 7 of DIN 51097.

Should the test specimen be fabricated by the test body, the latter must be supplied with approximately 0,7 m² of the floor covering under test.

Where floor coverings are fabricated only at the site of installation itself (e. g. industrial floors, plastic floor coatings), the test specimens must be fabricated by the requesting party. Section 5.1.4 of DIN 51130/Section 7 of DIN 51097 must be observed in this case.

Where the profile of a floor covering is directional, test specimens in two orientations (perpendicular to each other) are required.

Testing of the spillage displacement volume

For testing of the spillage displacement volume, 5 test specimens with the dimensions $(10 \pm 0,1) \times (10 \pm 0,1)$ cm must be submitted. Section 6.3 of DIN 51130 must be observed during fabrication of the test specimens.

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

4.5 Retention of test specimens and test documentation

The tested floor covering specimens 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 requesting party's expense.

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

4.6 Test certificates

Providing the floor covering passes the type examination, a test certificate is issued (Figure 1). If desired and requested, a DGUV Test certificate authorizing use of the DGUV Test mark (Figure 2) may also be issued; in this case the form of marking must be agreed with the IFA, and a sample of the mark submitted for approval.



Figure 1: BGR/GUV-R 181

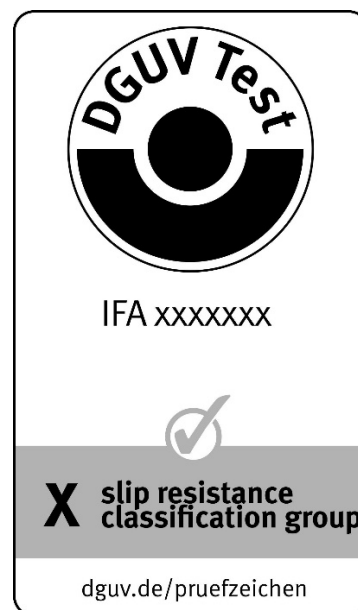


Figure 2: BGI/GUV-I 8527

Test certificates with a positive assessment of the test specimens are limited to 5 years during the valid period.

In the case of individual tests, the applicant only receive a test notification.

5 Test fees

The test fees levied by the IFA are based upon the applicable test principles and the IFA's relevant hourly rate. Should the test principles/hourly rate be amended, amended test fees apply accordingly. Attention is drawn to the general terms and conditions of the German Social Accident Insurance (DGUV).

6 Validity

The present test principles apply as of 1 January 2016.

Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA)