



Criteria for the allocation of the TÜV PROFiCERT-product Interior brand

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1 General information

„TÜV PROFiCERT-product Interior“ is a certification procedure specifically developed for interior products, e.g. for floor coverings, sports floor systems, wall and ceiling coverings, wood-based materials and flooring underlays. Certification is done according to health and quality criteria. The criteria are selected in such a way that constructors, commerce and trade as well as the end customer obtain transparent and reliable information on the product on a comparable basis.

TÜV PROFiCERT-product Interior takes into account the crucial processes of the product manufacturing and the factory's own production control. In addition, continuous surveillance is done by the approved and accredited testing laboratories “Entwicklungs- und Prüflabor Holztechnologie GmbH” (EPH) and TFI Aachen GmbH (TFI).

The method used for the testing and monitoring cover the following three elements:

- **Initial type test**
For the initial type test, each product (product group) and/or each system is inspected for compliance with the determined criteria on the basis of the worst case scenario (more detailed information see Chapter 3).
- **Auditing**
The quality assurance measures taken by the manufacturer himself (own monitoring measures) are examined in the companies concerned (more detailed information see Chapter 4).
- **Monitoring tests**
At least once a year, products are taken by TÜV Hessen or the inspection bodies EPH and/or TFI at the production site or from the market and monitored in view of their compliance with the test criteria, e.g. by using the screening method. (For more detailed information, please refer to Chapter 5).

A certification is only possible if all the conditions set out are met. Depending on the product group, different requirements have been defined for the products. The criteria for TÜV PROFiCERT-product Interior Standard are the minimum requirements to be adhered to. The objective is to prevent that products which might constitute a health hazard to the consumer are not labelled.

The brand "TÜV PROFiCERT-product Interior" is offered in four variants:

- TÜV PROFiCERT-product Interior Standard
- TÜV PROFiCERT-product Interior Standard with additional quality testing
- TÜV PROFiCERT-product Interior PREMIUM
- TÜV PROFiCERT-product Interior PREMIUM with additional quality testing

According to all scientific findings, products and constructions which fulfil the criteria of the standard variant also meet the requirements for a healthy living and working environment. Therefore, comparable criteria can also be found in the statutory requirements of certain countries.

The very stringent requirements of the PREMIUM variant can only be met by products or constructions by using exclusively selected preliminary products and moreover by taking special care during the production process. Therefore, these products ensure a very good indoor quality already at the beginning of the use phase.

In addition to the health-related evaluation, it is also possible to have additional functional and quality tests performed and to promote them. Thus, the consumer obtains information on further properties of



the product. The type of test to be conducted depends on the product category and can be derived from the certificate itself.

On the internet, TÜV Hessen publishes the tested products by indicating the relevant certificate number and the status of the certificate (www.proficert.com).

2 General requirements for the product and the substances used

The materials used for the product manufacturing shall not contain or release any substances or preparations as constituents that are

- (1) substances identified as substances of high concern according to the regulation for chemicals REACH (EU) 1907/2006 and included in the list established according to REACH, Article 59 (1) (so-called "list of candidates").
- (2) substances classified into the following hazard classes and categories according to the criteria of the CLP-Regulation or substances that meet the following criteria for such a classification:
 - carcinogenicity according to category Carc. 1A or Carc. 1B (H350); in deviation thereof, there are emission thresholds for formaldehyde (see Table 1 and Table 2)
 - germ cell mutagen (mutagenic) according to category Muta. 1A or Muta. 1B (H340)
 - reproductive toxicity (toxic to reproduction) according to category Repr. 1A or Repr. 1B (H360F, H360D, H360FD, H360Fd, H360Df)
 - acute toxicity according to category Acute Tox. 1, Acute Tox. 2 or Acute Tox. 3 (H300, H301, H310, H311, H330, H331)
 - specific target organ toxicity according to category STOT, single exposure 1 or STOT repeated exposure 1 (H370, H372)
- (3) classified according to the German Technical Rules for Hazardous Materials 905 (TRGS 905):
 - carcinogenic substances (K1, K2)
 - mutagenic substances (M1, M2)
 - substances toxic to reproduction (RF1, RF2)
 - substances known to impair fertility in humans (RE1, RE2).

The product shall meet all legal requirements of the country in which it is to be provided and/or in which the manufacturer intends to provide it. These include amongst others (if applicable):

- REACH Regulation (EU) No. 1907/2006
- Biocides Regulation (EU) No. 528/2012
- Construction Products Regulation (EU) No. 305/2011
- German Chemicals Regulation
- German Model Administrative Provision – Technical Building Rules (Musterverwaltungsvorschrift Technische Baubestimmungen - MVV TB), version 2017/1, Annex 8, § 2.2.2 Requirements of the content of PAK, nitrosamines and PCP (product-specific check of the relevant parameters, e.g. in accordance with DIBt priority list)



By signing the monitoring contract, the applicant declares to comply with the requirements of the substances to be used in the product and to respect the legal requirements. Furthermore, a random sampling of the substances used is done within the scope of the monitoring tests.

3 Initial type test

The initial type test is made to find out whether the prerequisites for the certification of a product or a system are met. The initial type test always comprises an assessment of the effects on human health and may be supplemented by quality statements. The underlying test criteria for the initial type test are described in the following chapters.

3.1 Emission testing for consumer health protection

The evaluation of the effects of the products on human health is based on the rules of the AgBB scheme. The emissions of volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC) are determined according to the ISO 16000 series or to the standard EN 16516 by the use of the test chamber method. For the tests, only products will be used which are not older than three (3) months at the time of the sampling (merchantability must have been obtained).

3.1.1 TÜV PROFiCERT-product Interior Standard

Table 1: Emission thresholds and requirements for TÜV PROFiCERT-product Interior Standard

TÜV PROFiCERT-product Interior Standard		
Parameter	Requirements [$\mu\text{g}/\text{m}^3$]	
	3-day testing	28-day testing
Total volatile organic compounds TVOC (AgBB)	< 10,000	$\leq 1,000$
Total of semi-volatile organic compounds TSVOC		≤ 100
Total of VOC without LCI (D)		≤ 100
R-Value (LCI) (D))*		≤ 1
Formaldehyde		< 60
Acetaldehyde		≤ 200
Toluene		≤ 300
Tetrachloroethylene		< 350
Xylene		< 300
1,4-Dichlorobenzene		< 90
Styrene		< 350
Trichloroethylene		≤ 1
DEHP		≤ 1
DBP		≤ 1
Carcinogenic, mutagenic substances and substances toxic to reproduction (EU-category 1A and 1B according to CLP Regulation (EC) No 1272/2008)	$\Sigma \leq 10$	≤ 1 each
Ammonia **		≤ 149
Nitrosamines **		≤ 0.2

* dimensionless parameter (for every single value $K_i/\text{NIK}_i \leq 1,0$)

** test only if parameter is of relevance to product



For coated and uncoated wood materials, the test conditions are analogue to MVV TB load 1 m²/m³ (wall) and narrow surfaces completely sealed.

The compliance with the requirements is also ensured when all 28-days parameters are fulfilled at an earlier point of time than after 28 days.

Thus, the **TÜV PROFiCERT-product Interior Standard** brand meets the following emission requirements:

- AgBB, August 2018
- Annex 8 of the German Model Administrative Provision – Technical Building Rules (MVV TB / ABG), version 2017/1
- Emission class A according to the French regulation on VOC „Décret n° 2011-321 du 23 mars 2011“
- Belgian VOC regulation on emissions from construction products „8 MEI 2014. - Koninklijk besluit tot vaststelling van de drempelniveaus voor de emissies naar het binnenmilieu van bouwproducten voor bepaalde beoogde gebruiken“
- LEED v4 (outside North America; LEED v4 for BUILDING DESIGN AND CONSTRUCTION, April 5, 2016)
- BREEAM International New Construction 2016 (Technical Manual SD233 2.0), General Level



3.1.2 TÜV PROFiCERT-product Interior PREMIUM

Table 2: Emission thresholds and requirements for TÜV PROFiCERT-product Interior PREMIUM

TÜV PROFiCERT-product Interior PREMIUM		
Parameter	Requirements [$\mu\text{g}/\text{m}^3$]	
	3-day testing	28-day testing
Total volatile organic compounds TVOC (AgBB)	< 1,000	≤ 160
Total of semi-volatile organic compounds TSVOC		≤ 100
Total of VOC without LCI (D)		≤ 100
R-Value (LCI) (D))*		≤ 1.0
Formaldehyde		< 10
1,4-Dichlorobenzene		< 60
Trichloroethylene		≤ 1
DEHP		≤ 1
DBP		≤ 1
Carcinogenic, mutagenic substances and substances toxic to reproduction (EU-category 1A and 1B according to CLP Regulation (EC) No 1272/2008)	$\Sigma \leq 10$	≤ 1 each
Ammonia **		≤ 24
Nitrosamines **		≤ 0.2
In addition or deviating for textile floor coverings:		
Total volatile organic compounds TVOC (AgBB)	≤ 250	≤ 100
Total of semi-volatile organic compounds TSVOC		< 30
Total of VOC without LCI (D)		≤ 50
Formaldehyde, acetaldehyde and other aldehydes per		≤ 4
4-Phenylcyclohexene		≤ 5
1,4-Dichlorobenzene		≤ 40
2-Ethylhexanoic acid		≤ 15
4-Vinylcyclohexene		≤ 2
Ethylbenzene		≤ 40
Naphthalene		≤ 3
Styrene		≤ 2
Tetrachloroethylene		≤ 10
Toluene		≤ 20
Vinyl acetate		≤ 40
Xylenes		≤ 40
In addition or deviating for resilient floor coverings		
Total of semi-volatile organic compounds TSVOC (AgBB)		≤ 30
In addition to or deviating for flooring installation products and underlays		
Total volatile organic compounds TVOC (toluene equivalent)	≤ 750	≤ 60
Total of VOC without LCI (D)		≤ 40
Acetaldehyde		≤ 40

* dimensionless parameter

** test only if parameter is of relevance to product



For coated and uncoated wooden materials, the test conditions are analogue to DE-UZ 76: load 1.4 m² / m³ (wall + ceiling) and narrow surfaces sealed as EN 717-1.

Thus, the **TÜV PROFiCERT-product Interior PREMIUM** brand meets the following emission requirements:

- AgBB, August 2018
- Annex 8 of the German Model Administrative Provision – Technical Building Rules (MVV TB / ABG), version 2017/1
- Emission class A+ according to the French regulation on VOC „Décret n° 2011-321 du 23 mars 2011“
- Belgian VOC regulation on emissions from construction products „8 MEI 2014. - Koninklijk besluit tot vaststelling van de drempelniveaus voor de emissies naar het binnenmilieu van bouwproducten voor bepaalde beoogde gebruiken“
- LEED v4 (outside North America; LEED v4 for BUILDING DESIGN AND CONSTRUCTION, April 5, 2016)
- BREEAM International New Construction 2016 (Technical Manual SD233 1.0), Exemplary Level
- Finnish M1 classification for construction products, version 15.11.2017 (the requirements for acceptability and ammonia are not included. The emission of ammonia for smoked oak parquet is an exception).

In addition for textile floor coverings:

- GUT / PRODIS (Gemeinschaft umweltfreundlicher Teppichboden e.V.) (The requirements for odour are not included)
- DE-UZ 128 (Blue Angel) February 2016 (The requirements for odour are not included)
- EU-Ecolabel for textile floor coverings (2009/967/EC)
- Austrian environmental label, guideline UZ 35, textile floor coverings, version 4.0, January 1, 2019 (The requirements for odour are not included)

In addition for resilient floor coverings:

- DE-UZ 120 (not for PVC flooring), February 2011
- Austrian environmental label, guideline UZ 42, elastic floor coverings, version 4.0, 1. January 1, 2019 (The requirements for odour are not included)

In addition for parquet and wood flooring, laminate floor coverings, MMF floor coverings:

- DE-UZ 176 (Blue Angel), January 2013
- Austrian environmental label, guideline UZ 07, wood, wooden materials and wooden floor coverings, version 9.0, 1. January 1, 2019

In addition for underlays for installation, flooring installation materials:

- Emicode EC1^{Plus}, 18.04.2018
- DE-UZ 113 (installation materials), June 2011
- DE-UZ 156 (flooring underlays), February 2011



In addition for coated and uncoated wood materials:

- DE-UZ 76 (Blue Angel)
- Austrian environmental label, guideline UZ 07, wood, wood-based materials and floor coverings made of wood, version 9.0, 1 January 2019



3.2 Functional and quality testing

3.2.1 Floor coverings

The functional and quality tests are based on the following classification standards for floor coverings in the respective valid version. The results achieved can be promoted by the use of pictograms according to FCSS (Floor Covering Standard Symbols) and are listed in the certificate.

Textile floor coverings:

- EN 1307 Textile floor coverings - Classification of textile floor coverings
- EN 14215 Textile floor coverings - Classification of machine-made pile rugs and runners

PVC floor coverings:

- EN ISO 10581 Resilient floor coverings - Homogeneous poly(vinyl chloride) floor coverings - Specification
- EN ISO 10582 Resilient floor coverings - Heterogeneous poly(vinyl chloride) floor coverings - Specification
- EN 26986 Resilient floor coverings - Expanded (cushioned) poly(vinyl chloride) floor covering - Specification
- EN 650 Resilient floor coverings - Polyvinyl chloride floor coverings on jute backing or on polyester felt backing or on polyester felt with polyvinyl chloride backing - Specification
- EN 651 Resilient floor coverings - Polyvinyl chloride floor coverings with foam layer - Specification

Linoleum:

- EN ISO 24011 Resilient floor coverings - Specification for plain and decorative linoleum
- EN 686 Resilient floor coverings - Specification for plain and decorative linoleum on a foam backing
- EN 687 Resilient floor coverings - Specification for plain and decorative linoleum on a corkment backing
- EN 688 Resilient floor coverings - Specification for corklinoleum

Cork floor coverings

- EN 12104 Resilient floor coverings - Cork floor tiles - Specification

Elastomer floor coverings:

- EN 1817 Resilient floor coverings - Specification for homogeneous and heterogeneous smooth rubber floor coverings
- EN 1816 Resilient floor coverings - Specification for homogeneous and heterogeneous smooth rubber floor coverings with foam backing
- EN 12199 Resilient floor coverings - Specifications for homogeneous and heterogeneous relief rubber floor coverings
- EN 14521 Resilient floor coverings - Specification for smooth rubber floor coverings with or without foam backing with a decorative layer



Multi-layer, modular floor coverings

- EN 16511 Loose-laid panels - Semi-rigid multilayer modular floor covering (MMF) panels with wear resistant top layer
- EN ISO 20326 Resilient floor coverings - Specification for floor panels for loose laying
- EN 17142 Modular multilayer floor coverings - Elements with a wood powder based surface layer - Specifications

Synthetic thermoplastic polymers

- EN 14565 Resilient floor coverings - Floor coverings based upon synthetic thermoplastic polymers - Specification

Laminate floor coverings

- EN 13329 Laminate floor coverings - Elements with a surface layer based on aminoplastic thermosetting resins - Specifications, requirements and test methods
- EN 14978 Laminate floor coverings - Elements with acrylic based surface layer, electron beam cured - Specifications, requirements and test methods
- EN 15468 Laminate floor coverings - Elements with directly applied printing and resin surface layer - Specifications, requirements and test methods

Parquet and wood flooring

- EN 14354 Wood-based panels - Wood veneer floor coverings
- EN 13226, Wood flooring - Solid parquet elements with grooves and/or tongues
- EN 13629, Wood flooring - Solid individual and pre-assembled hardwood boards
- EN 13489, Wood flooring - Multi-layer parquet elements
- EN 13990, Wood flooring - Solid softwood floor boards

3.2.2 Sports floor systems

The functional and quality tests are based on the following classification standards for sports floor systems (sports functional and protective functional requirements) in the respective valid version.

Table 3: Sports functional and protective functional requirements of sports floor systems

	Parameter	Normative specification	Requirements
1	Shock absorption	EN14808:2006	C4, M4, P3, A4
2	Standard deformation	EN 14809:2006	C4, M4, P3, A4
3	Coefficient of sliding friction	EN 13036-4:2011	80-110
4	Resistance to impact	EN 1517:2001	≥ 8 Nm (only C, P, M)
5	Rolling load	EN 1569:2000	≥ 1500 N
6	Abrasion resistance of the sealing	EN ISO 5470-1:1999	≤ 80 mg
7	Abrasion resistance of the surface layer (without sealing)	EN ISO 5470-1:1999	≤ 1000 mg
8	Deformation trough	DIN 18032-2:2001	C ≤ 5% w500, M > 0% w100 + 0% w500, P = 0% w100, A ≤ 20% w500
9	Vertical ball behaviour	EN 12235:2013	90 %
10	Residual indentation	EN 1516:2000	≤ 0.5 mm
11	Flatness	EN 13036-7:2003	≤ 2 mm over 0.3 m ≤ 6 mm over 3 m

P: point-elastic M: mixed-elastic C: combined-elastic A: area-elastic

Due to the fact that sports floor systems are installed in-situ, the compliance with the quality criteria depends on the delivered materials and the quality of installation. Therefore, the following documents have to be presented to the Inspection Body for every construction project:

- proof of the materials installed during the construction project (e.g. proof by delivery notes)
- report of a sports functional object inspection issued by a testing laboratory registered at TÜV/TFI/EPH (for all areas larger than 250 m²). Deviations from this requirement are only acceptable if the developer presents a written waiver.

The inspection body issues a confirmation for each construction project on the basis of the verification documents.

3.2.3 Cleaning systems for textile floor coverings

The functional and quality tests for cleaning systems ensure that the declared cleaning effect will be achieved. For this purpose, a test adapted to the respective cleaning system is conducted. These can be for example:

- Determination of the cleaning performance of soiled products according to the laboratory soiling test method ISO 11378-2
- Determination of the cleaning performance (staining according to the TFI-method)
- Determination of the water and oil repellency according to the 3M drop test and EN 14419



- Determination of the soiling propensity (soiling before and after cleaning, one or more cleaning cycles) according to the laboratory soiling test standard ISO 11378-2

Moreover it is examined, if the cleaning system has a negative impact on the properties of textile floor coverings. The main focus is set on the following properties:

- Colour fastness (colour fastness to artificial light according to ISO 105-B02, colour fastness to rubbing according to ISO 105-X12, colour fastness to water according to ISO 105-E01)
- Reaction to fire (the fire classification shall not be affected)
- Electrostatic charge during the walking test according to ISO 6356

3.2.4 Underlayer for floor coverings

- EN 16354 Laminate flooring underlayers - specifications, requirements and test methods (general requirements according to Table 1)
- MMFA - Technical Data Sheet TM1 – Underlayer materials for multi-layer modular floor coverings (MMF) - testing standards and performance indicators (minimum requirements according to 5.1 and 5.2)

3.2.5 Wooden materials

For melamine-coated wood-based materials (chipboard or MDF), the following surface requirements according to EN 14322 must be observed:

- Behaviour under scratch strain
- Stain resistance
- Crack susceptibility
- Abrasion resistance (declared class according to table 2)

4 Auditing

The manufacturer shall develop an own monitoring system for the products / production. For this purpose, manufacturers shall make available suitable skilled personnel, facilities and devices. The results of the manufacturer's own monitoring measures shall be recorded and evaluated. The own monitoring measures shall be performed according to the principles of DIN 18200 and, if applicable, according to the requirements of the own factory production control for products underlying a harmonized standard.

At least once a year, the own monitoring system shall be monitored at the production site by EPH/TFI or TÜV Hessen. The following requirements are checked:

- documentation requirements
- performance requirements
- customer requirements
- demands on employees
- test requirements



5 Monitoring tests

In order to guarantee the certificate's statements about the product or the systems, the TÜV Hessen or the EPH/TFI will take representative samples from the manufacturer or the market at least once a year in addition to the audits performed at the production site. These samples are monitored in view of the compliance with the test criteria, e.g. by using the screening method. The monitoring comprises the assessment of the effects on human health and, if part of the certificate, the statements about the product quality. The regular monitoring is intended not only to test the product directly, but also to perform an indirect quality review of the factory production controls.

6 Certification body and testing and monitoring bodies

Certification body:

TÜV Technische Überwachung Hessen GmbH

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