TKB-Technical Briefing Note 16

Generally Recognized Codes of Practice for CM Measurement

English translation of the German *TKB-Merkblatt 16 „Anerkannte Regeln der Technik bei der CM-Messung“*, published March 2016

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In cooperation with:

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- Zentralverband Raum und Ausstattung (ZVR)
- Bundesverband der vereidigten Sachverständigen für Raum und Ausstattung e.V. (BSR)
- Bundesverband Farbe Gestaltung Bautenschutz
- Bundesverband Estrich und Belag e.V. (BEB)
- Fachverband der Hersteller elastischer Bodenbeläge e.V. (FEB)
- Verband der Deutschen Parkettindustrie e.V. (vdp)
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1. Preface

On December 20, 2013, the leading German professional associations from the sector of flooring technology:

- Zentralverband Parkett und Fußbodentechnik (ZVPF)
- Zentralverband Raum und Ausstattung (ZVR)
- Bundesverband der vereidigten Sachverständigen für Raum und Ausstattung e.V. (BSR)
- Bundesverband Farbe Gestaltung Bautenschutz
- Technische Kommission Bauklebstoffe (TKB) im Industrieverband Klebstoffe e.V. (IVK)

have adopted a joint statement regarding state-of-the-art regarding CM measurements which was subsequently published in January of 2014 [1]. The intention was the following:

a) to standardize the sampling locations.
b) to establish responsibility for determination of readiness for installation based on the results of the CM measurement.

In addition to this cross-association statement and in order to complete and further detail the description of technical state-of-the-art, the TKB has issued this TKB data sheet No. 16 regarding generally recognized codes of practice for CM measurements.

In particular, this data sheet contains information on:

1. Work instructions for performing CM measurement
2. Protocol for documentation of screed moisture measurement applying the CM method
3. Definition of the term "readiness for installation"
4. Standard values for moisture content when ready for installation
5. Notes regarding number and position of measuring points for moisture measurement
6. Notes regarding responsibility for determination of readiness for installation
7. Specification of locations of sampling
8. Notes regarding duty of installer for testing/inspection
9. Notes regarding legal relevance of documentation of moisture testing
10. Notes regarding legal relevance of information provided by customer
11. Notes regarding registration of objections

12. Notes regarding definitions of current state-of-the-art

This TKB data sheet No. 16 is intended to assist the installer regarding the correct technical performance of the CM measurement and preparing legally safe documentation of his evaluation of the moisture level of a cement or calcium sulphate based screed with regard to its moisture state.

Definitions: In the following text, the term "Installer" refers to all contractors laying floor coverings on a screed. Floor coverings (subsequently all designated as "Coverings") can be: parquet, elastic floor coverings, textile floor coverings, ceramic tiles and natural stone, polymer coatings, mineral design and final topping levelling compounds. Consequently, the term "Installer" includes, among others, the following professions: parquet layers, floor layers, painters, tile setters, coaters etc.

Exceptions from this definition is Appendix A, which reproduces the original source text.

2. Performing the CM Measurement

Work instructions for performing the CM measurement

Preliminary note

With the CM measurement, the moisture content of a screed is determined which is one criterion for determining the readiness for installation of covering.

Advice for screeds with underfloor heating

For sample taking for the CM measurement when underfloor heating system is present, measuring points must be designated/specified by the screed layer or the client.

General notes regarding performing of the measurement

1. Basically, loss of moisture during taking and preparation of samples must be minimized. Ensure this by proceeding as follows:
   - Take and prepare samples as quickly as possible.
   - Never prepare the samples in direct sunlight or when a draft is present.
   - Only pre-crush the sample to a size (after pre-crushing, no pieces larger than 10 mm) that they can be completely ground down in the CM analyzer during the test procedure described below.
     The sample is completely crushed when the test material only consists of pulverized binding agent and individual aggregate particles.
2. The test material inspection is the last step of the measurement process. Should the test material be insufficiently crushed, the measurement must be repeated in full.

Preparatory measures prior to sample taking

1. The CM analyzer shall be regularly checked for accuracy or when there is suspicion of incorrect measurement results.
   To this end, perform a calibration measurement with a specified quantity of water.
   Deviation from target value shall not exceed 25 mbar. If necessary, replace manometer.
2. Perform leak test of CM analyzer, if necessary replace rubber gasket.
3. Check cleanliness of CM analyzer.
4. Fill CM analyzer with clean steel balls according to manufacturer's instructions.
5. If required, attach scale to casing of device.
6. Prepare scale (accuracy +/- 1 g), mortar, hammer, spatula, 2 PE bags and funnel, if required.
7. Have protocol for screed moisture testing at hand.

Performing the CM measurement

1. Take the screed samples evenly across the lower half of the screed and immediately place them into the PE bags.
2. Using the hammer, pre-crush the test material inside the PE bag in the mortar. After pre-crushing, no pieces larger than 10 mm shall be present.
3. Place the pre-crushed material into another PE bag and homogenize it by shaking the content.
4. Use spatula to transfer the pre-crushed and homogenized test material onto the scale and weigh the required sample amount: Calcium sulphate screed: 100 g, Cement screed: 50 g
5. Carefully transfer the test material from the scale into the CM analyzer, already containing the steel balls. By using a suitable funnel, loss of test material can be avoided.
6. Slightly tilt the CM analyzer and add a vial of calcium carbide.
7. Close the CM analyzer and then shake well until manometer pressure gauge rises.
8. Shake the CM analyzer well for 2 minutes. Make sure the steel balls do not hit the manometer placed on top as lid.

9. 5 minutes after closing the CM analyzer, shake well for another minute.
10. 10 minutes after closing the CM analyzer, briefly shake it again (approx. 10 seconds) and then immediately read the value off manometer.
    Note: Basically, a further rise in pressure is possible. This can be disregarded, since it is only the reaction of chemically bound water.
11. Next, either read CM value directly off manometer or take it from calibration table and then enter it into the protocol of screed moisture measurement.
12. Empty the CM analyzer and check the test material.
    In the event that the test material is not completely crushed (correct condition: pulverized binding agent and individual aggregate particles), the measurement is to be repeated. During the repeat test, shake the CM analyzer more vigorously with greater force.
13. Carefully clean the CM analyzer.
14. Properly dispose of test material. The test material contains excess calcium carbide which must first be neutralized by adding a small amount of water. Potentially, a small amount of acetylene gas may be generated. Subsequently, the test material can be disposed of with construction waste.

Safety note: Wear safety goggles when adding water to calcium carbide and stay away from ignition sources, since acetylene is a flammable gas.
When disposing into construction waste please note that glass shards from the calcium carbide vial can be present.

3. Protocol of CM Measurement

Protocol of screed moisture measurement using CM method						
Information regarding location of screed in building						
• Building / property: address • Construction section / part of building • Floor / Number of apartment						
Room No.						
Customer for floor covering/parquet work						
Customer for floor covering/parquet work: Name, address, contact						
Information provided by customer regarding screed (where appropriate after consultation with screed manufacturer)						
Information must be given **for each room individually!**						
Screed construction/ type of installation	a) floating floor b) screed on separating layer					
Binding agent type	a) cement-based screed (CT) 1. cement type (e.g. CEM I, CEM II/A-LL) 2. Additives used b) calcium sulphate screed (CA) c) rapid cement screed					
Date of screed installation	Where appropriate differentiated by installed sections					
Nominal thickness of screed	[mm]					
Maximum screed thickness	[mm]					
Warm water underfloor heating	Yes / No					
Max. CM moisture content when ready to install	**[CM-%]**					
Documentation of measuring results for screed moisture content						
Data	Measuring point No.		**1**	**2**	**3**	**4**
	Date					
	Tester					
	Air temperature	[°C]				
	Relative humidity	[%]				
	Substrate-surface temperature	[°C]				
	For underfloor heating systems: Heating protocol available?	Yes / No				
	Measuring points for underfloor heating system marked/shown?	Yes / No				
	Screed thickness	[mm]				
CM measurement	**Performance of CM measurement acc. to item 2 of this TKB data sheet No. 16**					
	Sampling of test material evenly over lower half?	Yes / No				
	Weight of sample taken	[g]				
	Manometer reading	[bar]				
	Water content	[CM-%]				
	Ready for installation	**Yes / No**				
	Notes					
Confirmation of measuring results						
Signature of tester		**Signature of customer**				

4. Comments and notes regarding CM measurement

4.1 Definition of readiness for installation

The moisture content of a screed is only one of several test criteria to be evaluated in order to assess the readiness of a screed for subsequent installation.
These additional criteria and corresponding testing methods are listed and described in the relevant standards and related comments ([2], [3], [8], [9], [10]).

Definition of the term "readiness for installation":
Readiness for installation is the condition a screed has reached relating to setting and drying reactions, so that it is ready for a damage- and defect-free permanent installation of a floor covering.

The main time-dependent parameters that characterize readiness for installation are:

- Sufficient drying.
- Sufficient hardness.
- Sufficient shrinkage reduction.

Specification for these parameters may differ depending on the type of covering to be installed.

The designation of these parameters as criteria for readiness for installation extends other definitions which exclusively equal sufficient drying with readiness for installation ([8], [9], [10], [16], [17]).

4.2 Sufficient drying

4.2.1 Standard values for moisture content when evaluating readiness for installation according to CM method

Currently, the following standard values are taken into account when readiness for installation of a screed is solely evaluated based on its moisture content:

Type of screed	Unheated	Heated screed
Calcium sulphate screed, calcium sulphate flow screed (CA, CAF)	≤ 0.5 CM-%	≤ 0.3 CM-%
Cement-based screed (CT)	≤ 2.0 CM-%	≤ 1.8 CM-%

Note:
The standard value for readiness for installation of heated calcium sulphate (flow) screed has been set at 0.5 CM-% according to the latest version of DIN 18560-Part 1:

- DIN 18560-1:2015-11 – Estriche im Bauwesen – Allgemeine Anforderungen, Prüfung und Ausführung [14]

This value substantially deviates from the value of 0.3 CM-% cited in all other sources.
The current version of DIN 18365:2015-08 [18] now refers to standards series DIN 18560 regarding evaluation of moisture content and consequently also to the changed standard moisture value of 0.5 CM-% for the assessment of readiness for installation of heated calcium sulphate (flow) screeds.

Since there is a lack of data, justification or publications regarding this increased standard value of 0.5 CM-% for readiness for installation of heated calcium sulphate screeds, this current data sheet continues to adhere to the previous standard of 0.3 CM-%, which in practice has been proven as a reasonable and reliable indicator. An increase of the standard value to 0.5 CM-%, which in fact corresponds to an increase by 67%, would on the one hand shorten the drying time of the screed until it reaches readiness for installation, however on the other hand would significantly increase the risk of moisture damage for the installer as well as for the customer.

The above standard values are based on laboratory tests and long-term experience. Based on this experience, they include an established difference between moisture content of the screed in equilibrium with ambient room climate and the higher moisture content of the screed at the time of installation of covering.

When screed composition is altered, in particular by using screed additives, the equilibrium moisture content of the screed can change and consequently also the difference from the above standard values for moisture content at time of readiness for installation. In the event that the equilibrium moisture content decreases as a result of a reduced water/cement-ratio, the difference to above standard values widens and the risk of possible moisture damage increases. And vice versa, higher cement content of high-strength screeds will result in higher equilibrium moisture content which would allow for higher standard values for readiness for installation.

This context requires customer, after consultation with screed installer, to give floor installer clear specifications regarding maximum CM moisture content for achieving readiness for installation and to record them in screed moisture measurement protocol.

4.2.2 Number and position of measuring points for CM measurement

The screed moisture measurement protocol does not contain specifications regarding number and location of measuring points.
The screed moisture measurement protocol stipulates an individual room for which up to 4 measurements can be recorded.

The overall planning, selection and complete documentation of the measuring points shall be documented in a separate testing plan (especially for very large construction projects / construction sections).

Indications regarding the required number of measuring points can be found in the relevant standard comments and reference books ([8], [9], [11], [12]).

The following summary overview can be obtained from the literature ([8], [9], [11], [12]):

Room / area	Number of measurements (unheated and heated screeds)
Area up to 100 m²	1 to 2 measurements
Multi-storey buildings	Minimum 1 measurements per floor
Areas over 100 m²	1 measurement per 200 m²

Room / area	Measuring points to be identified for heated screeds
Room	Minimum 2 measuring points per room
Room > 50 m²	Minimum 3 measuring points.
Areas > 200 m²	3 measuring points per 200 m²

4.3 Sufficient hardness

Typical cement screeds require approximately 4 weeks for sufficient hardening, provided that their water content has not been overly reduced by screed additives and therefore a sufficient amount of water required for hydration reactions was used in their preparation.

For calcium sulphate based screeds the actual hardening process is completed after approx. 2 weeks. However, hardening of calcium sulphate based screeds is greatly influenced by the degree of drying. In order to reach the standard hardness specifications, a calcium sulphate based screed shall be "dry", i.e. its moisture content shall be below 0.5 CM-%.

For rapid cement screeds or screeds with screed additives, the manufacturer's specifications regarding hardness development are applicable.

4.4 Sufficient shrinkage reduction

With cement screeds based on regular cement without screed additives, the required hardness and reduction of shrinkage is normally achieved after 28 days.

Appendix A

Assessment of readiness for installation of screeds for floor covering and parquet work according to CM method – state-of-the-art:

Joint statement of the following professional associations:

- Zentralverband Parkett und Fußbodentechnik (ZVPF)
- Zentralverband Raum und Ausstattung (ZVR)
- Bundesverband der vereidigten Sachverständigen für Raum und Ausstattung e.V. (BSR)
- Bundesverband Farbe Gestaltung Bautenschutz
- Technische Kommission Bauklebstoffe (TKB) im Industrieverband Klebstoffe e.V. (IVK)

version 20.12.2013 [1]

Assessment of moisture content as one criterion for readiness for installation

DIN 18356 [2] and DIN 18365 [3] stipulate: "In the course of his examination, contractor shall voice his objections (see § 4 section 3 VOB/B) particularly with regard to insufficiently dry substrates." It is generally recognized that a new cement or calcium sulphate based screed is "ready for installation of floor covering" once it is sufficiently dry. To assess readiness for installation, the residual moisture of the screed is tested on samples taken at the building site. Several measuring methods are available, based on different measuring principles. The CM method is generally acknowledged state-of-the-art for on site assessment of readiness for installation. The procedure for moisture measurement according to the CM method is described in similar ways in different data sheets, standards and reference books, and there is broad consensus regarding the minimum requirements ([4], [5], [6], [7], [10], [11], [12], [13], [14]).

Responsibility for determination of moisture content for readiness for installation

The floor installer must assume that he can work with an even screed thickness [9]; at time of the scheduled installation, the customer must provide a substrate ready for installation, i.e. substrate shall be sufficiently dry [10]. Often, since the flooring/parquet installer is unaware of the exact composition and type of installation of the screed, he can not automatically draw a conclusion regarding readiness for installation from the determined CM value. Rather, he shall inform customer of the determined CM value. The customer normally has all information regarding characteristics or composition of the screed necessary to determine when the screed is actually ready for installation [10]. Readiness for installation can only be reliably determined by close consultation between flooring/parquet installer and customer, if necessary also with the assistance of screed installer.

Locations for test material sampling

However, there are different recommendations regarding the taking of samples from screeds.
Sources [4], [5] and [6] recommend to "basically take an average sample over the entire cross section of the screed". However, the sources note: "For parquet, the standard values traditionally refer to measurements in the lower or medium section of the screed. For subsequent installation of parquet, the average sample shall be taken from the lower and medium section of the screed."

The commentaries for DIN 18365 ([8], [9]) refer to the named sources [4] and [5], commentary for DIN 18356 [10] stipulates to take the sample from the lower sections of the screed in case parquet is to be installed. The relevant literature for parquet and floor covering installers ([11], [12]) give the instruction to take screed samples mainly from the lower screed sections.
In contrast, references [7] and [14] exclusively demand sample taking over the entire cross section, and different locations for sample taking in case of installation of parquet are not required as per these sources.

In Austria, the expert commission of the floor covering layers association recommends taking samples for the CM measurement from the lower half of the screed [13].

For all sample taking locations (cross-section, lower to medium section or lower screed layers), the specified standard values are identical with only a slight deviation [10].

Due to its construction (on separating layer or on insulating layer) a screed dries from top to bottom, i.e. a moisture gradient decreasing from bottom to top over the screed thickness occurs. Since sample taking from the medium to lower sections or lower screed layers results in higher moisture levels than with those taken over the entire cross-section, screeds prepared for installation of parquet show an overall lower moisture content at time of readiness for installation than screeds to be covered with textile or elastic floor coverings.

By covering the top of a screed during drying time, the moisture gradient can decrease or disappear altogether. Caused by pouring water on a screed surface at the building site, the moisture content of the upper layer of the screed may increase, easily detectable by an electrical measurement during pre-testing.

These different approaches regarding moisture measurement have always given rise to discussions between experts and floor covering and parquet layer associations and the supply industry. In this context it was repeatedly pointed out that for some floor coverings, mainly for dense elastic coverings, the existing thresholds were too high and would not ensure the desired safety. In order to put an end to this unsatisfactory situation, the associations of floor covering and parquet installers and the supplying industry agreed to recommend one type of sample taking for moisture measurements as per the CM method and to establish this method as state-of-the-art.

Modelled after the previous method of sample taking for subsequent installation of parquet floors, the test material shall now generally be taken from the lower half of the screed.
The benefits are clear:

- The existing thresholds which installers are familiar with are kept in place.
- The location of sample taking does not have to be varied depending on type of floor covering to be installed, i.e. textile/elastic/parquet/ceramic flooring.
- In particular for elastic floor coverings with high water vapour diffusion resistance installation safety increases significantly.

Appendix B
Comments regarding legal aspects of determination of substrate moisture content

In the following, please find some comments regarding legal assessment of selected aspects of substrate moisture measurement. A legal assessment, in particular of deficiencies where a connection with substrate moisture measurement and determination of readiness for installation is suspected, may vary and result in differentiated standpoints depending on the individual overall constellation. It is not intended and also impossible to provide legal assessments in this TKB datasheet No. 16 which are valid for every situation. We rather want to comment on selected legal aspects which shall lead installers to carefully consider and review contractual agreements, type of performance and documentation of substrate moisture measurement according to the CM method as well as determination of readiness for installation. This may then lead to further consultation or additional written agreements with the customer.

B.1 Comments regarding inspection requirements

1. Installer is obligated to test the screed for readiness for installation. The test for readiness for installation also includes moisture measurement of the screed.
2. The inspection requirements listed in DIN 18356 [2], DIN 18365 [3] and DIN 18352 [19] for preliminary work of other contractors normally do not include conclusive provisions; they are rather exemplary lists.
3. Underfloor heating systems:
   - 3.1. Specified measurement points:
     For heated screed constructions, there is an increased risks of damaging the heating system during sample taking for moisture measurements. For this reason, the measurement points need to be clearly specified.
   - 3.2. Heating protocol:
     In the event no measuring points for the moisture test have been specified in the screed, the moisture test can not be performed and the installer must voice his objections and inform customer of the possible consequences/damages when installing a floor covering on a screed which has not been tested. Within the framework of his inspection obligations, the installer must demand provision of the heating protocol for review. Should the protocol give no indication that a heating process has been performed in preparation of screed for installation of floor covering according to specifications in Schnittstellen-protokollen [4, 5; there protocol P 7], installer must register his objections with the customer in writing [15]. The heating protocol only gives an indication regarding possible readiness of the screed for installation, however, the result of the CM measurement is the only determining factor (see [4], [5]: "Readiness for installation is achieved once specifications of table 4 are complied with. The determining factor is the CM measurement.“) (Note: table 4: CT: 1.8 CM-%; CA: 0.3 CM-%).
   - 3.3. Subsequent specification of measuring points:
     Where necessary, suitable measuring points can be identified in screeds using appropriate measuring instruments (e.g. thermo films, infrared cameras). This task and responsibility for specification of these measuring points lies with customer.

B.2 Comments regarding legal evaluation of documents recording moisture content measurements

In the event of a defect materializing after acceptance of construction work and when customer suspects the cause being an elevated substrate moisture, he needs to prove the existence of this cause in liability procedures with installer; in addition, he has to prove that installer should have been aware of insufficient readiness of the screed for installation during his moisture testing.

Prior to acceptance of construction work, however, the burden of proof lies with the installer.

In the absence of a moisture measurement protocol, it must generally be concluded that a moisture measurement did not take place. (*Note: in a legal sense "generally" means "as a rule", "principally" (with the possibility of exceptions); in colloquial language however "generally" has the final characterization of "always", "on principle", "without exception"*).

However, it is strongly recommended to prepare a protocol as proof that moisture measurement was performed; in this sense, the protocol of moisture measurement is a document recommended by all co-publishing professional associations. However, it remains equally possible to document testing of the screed and its readiness for installation by other means.

The documented and proper moisture measurement which does not give rise to objections regarding readiness for installation is normally sufficient to exempt installer from the liability for subsequently discovered actual non-

readiness of the screed for installation; therefore, in their own interest, installers should prepare a protocol of screed moisture measurement which can later be provided as proof if needed.

B.3 Notes regarding specifications in protocol of screed moisture measurement

The protocol of screed moisture measurement shall only contain specifications relevant for assessment of moisture content.

The specifications to be entered in the protocol and provided by customer are important to assess the moisture content as one test criterion for the readiness for installation, responsibility for completeness and accuracy lies with the customer. However, installer can not blindly rely on this information, he needs to verify and check it as far as possible and reasonable. In the event he considers the information provided by customer as being incomplete, defective or technically incorrect, he needs to voice his objections. If the installer culpably infringes on his duty to test and inform regarding suitability and readiness for installation of the screed and is the entire work then compromised, his work is considered as defective [20].

B.4 Comments regarding stating of objections

Regarding his release from liability, installer shall state his comments and objections in due time, i.e. immediately and in the appropriate form and with the necessary clarity, specifically describing the adverse consequences and the resulting risks ([21], [22]). It is recommended to always state objections in written form.

Explanations of the procedure for stating objections can be found in the relevant standards and related comments ([2], [3], [8], [9], [10]).

The protocol for screed moisture measurements does not provide a section for stating objections. Objections shall be registered in detail in a separate document. On the document, customer shall confirm its receipt.

In the corresponding fields of the protocol for screed moisture measurement, a short note can be added informing that objections have been made, if necessary.

B.5 Comments regarding technical state-of-the-art

In the following, you will find some definitions for technical state-of-the-art and comments regarding the importance of standards. The terms are differentiated from each other and their significance for the installer is explained.

The generally recognized codes of practice are characterized by being:

- scientifically and theoretically accepted as correct.
- known to technical experts in the field.
- proven as reliable based on practical experience.

The generally recognized codes of practice are considered as defined criteria for contractual services. The contract may define deviations from the generally recognized codes of practice in writing. However, a defect generally exists when the contractual performance does not comply with the generally recognized codes of practice and it was not agreed in writing that deviations are allowed or demanded.

Unlike the generally recognized codes of practice, state-of-the-art describes rules which are known to trained professionals and are scientifically correct and incontestable, however not yet tried and tested in the long term.

Current state of science and technology describes technical rules which have been scientifically proven as correct and incontestable, however are not generally known to trained professionals and for which no long-term experience is available.

A connection between the above mentioned defined stages of state/rules of technology and DIN standards can be found in the stipulations of DIN:

1. DIN 820-1: 2014-06; section 7.7.:
   The contents of the standards shall be adapted to the general interest. The standards shall take into account the current state of science and technology as well as economic conditions. They contain rules designed for general application. Standards shall promote development and humanization of technology [23].
2. Guideline for DIN standards committees; 2013-09; section 10.4.:
   When selecting its members, the working committee shall take into account that
   … b) the latest scientific findings and the current state-of-the-art shall be introduced into the standardization work, … [24].
3. Guideline for DIN standards committees; 2013-09; section 10.6.:
   The tasks of a working committee include:
   … i) to monitor that existing standards and those to be prepared within its scope of responsibility comply with state-of-the-art, scientific findings as well as other German standards , … [24].

In addition, regarding DIN standards, the following needs to be noted:

- Basically, DIN standards are private regulations of a recommendatory nature only [25].
- Use of the DIN standards is entirely voluntary.
- DIN standards shall be based on established scientific, technological findings and experiences.
- DIN standards are based on the presumption of reflecting state-of-the-art.
- However, they may also lag behind state-of-the-art which can be proven by expert evidence [26].

For the floor laying trade, the contractual agreements with the customer are the decisive factor. These may deliberately deviate from the generally recognized codes of practice which then must be agreed in writing. DIN standards may reflect state-of-the-art, however, they do not necessarily have to. The generally recognized codes of practice can also be reflected in documents other than DIN standards, such as technical datasheets published by a broad majority of experts/professional associations.

This TKB-Briefing Note 16 describes the generally recognized codes of practice for CM measurements and is supported by the major professional associations dealing with installation of floor coverings.

Some specifications, e.g. regarding location of sample taking, moisture threshold for determination of readiness for installation with heated calcium sulphate screeds or regarding responsibility of customer for determination of readiness for installation thresholds are in conflict with contents of standard DIN 18560-1:2015-11. According to the authors of TKB-Briefing Note 16, this standard does not reflect the generally recognized codes of practice in this regard while this TKB-Briefing Note 16 indeed does.

5. Literature References

[1] Ermittlung der Belegreife von Estrichen für Bodenbelag- und Parkettarbeiten anhand der CM-Methode – Stand der Technik:

Gemeinsame Stellungnahme der Verbände:

- Zentralverband Parkett und Fußbodentechnik (ZVPF)
- Zentralverband Raum und Ausstattung (ZVR)
- Bundesverband der vereidigten Sachverständigen für Raum und Ausstattung e.V. (BSR)
- Bundesverband Farbe Gestaltung Bautenschutz
- Technische Kommission Bauklebstoffe (TKB) im Industrieverband Klebstoffe e.V. (IVK)

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