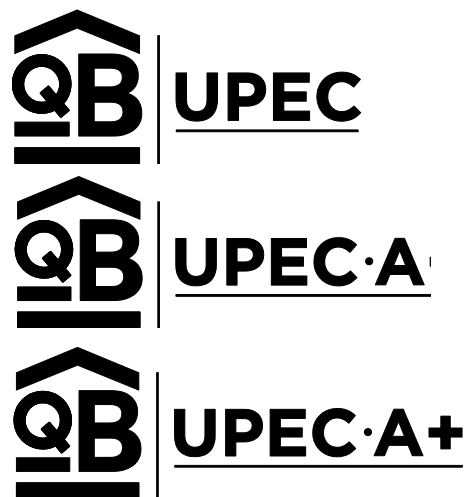


CERTIFICATION

# Addendum no. 01 to the QB 30 Certification Reference System: Resilient floor coverings



Identification No.: QB 30

Revision No.: 08

Addendum No. 01, approved by the CSTB Technical Management on: 2021/04/13

Application date: 2021/04/20

The English version is provided for information. In case of doubt or dispute, the French version only is valid.

**Addendum no. 01 to the QB 30 Certification Reference System –  
Resilient floor coverings  
Revision no.: 08**



This addendum brings together the new provisions applied to the following certification reference system QB 30 revision 08.

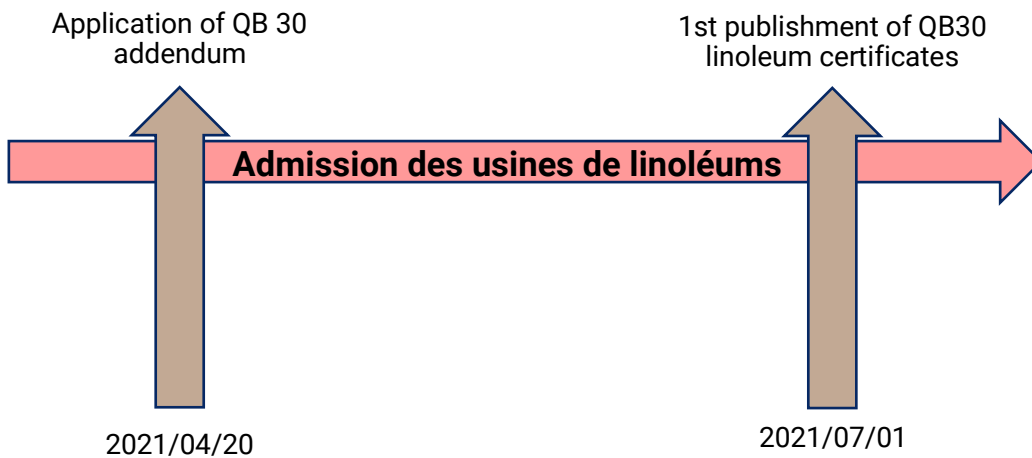
It was approved by the CSTB Technical Management on 2021/04/16 and will be applied from 2021/04/20.

**MODIFICATIONS BROUGHT ABOUT BY THE ADDENDUM TO THE FOLLOWING  
CERTIFICATION REFERENCE SYSTEM QB 30 REVISION 08:**

Modified part	Type of modification made
The full document	Add of linoleum product families and their specifications. Specificities about products for stairs laying. Restoration of UPEC.A for the certification of acoustic efficiency alone. Add of Specific Committee decision since 2019/01/01.

In this document, add of paragraph are written in black and replacement paragraph in blue.

**MANAGING THE REFERENCE SYSTEM'S TRANSITIONS**



## 1.1. Scope

- NF EN 686 - Specification for plain and decorative linoleum on a foam backing,
- NF EN ISO 24011 - Specification for plain and decorative linoleum.

### Acoustic properties.

For the resilient floor coverings having intrinsic acoustic properties  $\Delta L_w$  declared by the manufacturer applicant ( $\Delta L_{wr} \geq 15$  dB with the walk noise  $L_{n,e,w}$  class A ( $L_{n,e,w} < 65$  dB), the referential indicates under what conditions the improvement of impact sound insulation and the walk noise (acoustic performances) can be certified. In this case the QB mark Resilient floor coverings associated with the UPEC classification is completed by the letter A+ which symbolizes the acoustic performances of the product (UPEC.A+).

When the UPEC mark is completed by the letter A+, it means that the acoustic performances regarding the improvement of impact sound insulation and the walk noise of the product are certified.

Linoleum products are limited for acoustic certification to the impact sound insulation only. This certification is symbolised by a UPEC classification with the letter A (UPEC.A).

## 1.2. Certification added value

Certification is recognition by a third party of the conformity of the characteristics demonstrating the added value of the resilient floor coverings.

The certified characteristics of the application “QB UPEC(.A+) – Resilient floor coverings” are the following:

- According to Standard of the product family, such as:
  - Dimensions,
  - Overall thickness,
  - Wear layer thickness (if necessary),
  - Total mass per unit area,
  - Dimensional stability and curling,
  - Residual indentation.
- With a performance level higher than the one specified in the standards:
  - Castor chair test (if necessary) -> castors type H,
  - furniture leg (if necessary).
- Other characteristics:
  - Abrasion group,
  - UPEC classification according to the laying method:
    - U for wear resistance,
    - P for indentation,
    - E for presence of water on the floor,
    - C for resistance to stains and chemical agents.
  - Acoustic performances (if necessary)

The rating UPEC is the exclusive property of CSTB, whose registered office is at 84, avenue Jean-Jaurès, 77420 CHAMPS SUR MARNE, by virtue of the depository as simple classification mark made to INPI on its behalf.

These certified characteristics are assessed under CSTB's responsibility, with the following inspection resources:

	<b>Admission</b>	<b>Continued monitoring</b>
<p><b>Production audit carried out by a qualified technical auditor:</b></p> <ul style="list-style-type: none"> <li>- Verification that the production inspections and records have been carried out: raw material, manufacturing, finished products;</li> <li>- Verification of the quality command provisions: metrology, conditioning, storage, traceability, marking of products, management of non-conforming product and claims;</li> <li>- Supervision of certified characteristics tests carried out by the applicant, where applicable.</li> </ul>	<b>Yes</b>	<p><b>Yes</b></p> <p><b>Frequency:</b> <b>1 annual audit(s) (*)</b></p>
<p><b>Tests carried out by a laboratory recognised by the certifying body (independent and competent):</b></p> <ul style="list-style-type: none"> <li>- Samples taken by the certification body or the applicant (extension application only) and made on the applicant / holder's place.</li> </ul>	<b>Yes</b>	<p><b>Yes</b></p> <p><b>Frequency:</b> <b>1 annual test campaign (see sampling rules at § 3.5.)</b></p>

*(\*) An additional audit can be necessary whenever critical non-conformities are observed.*

The audit frequency may be increased to two annual audits whenever critical non-conformities are observed, or when a claim, approved and validated by the Specific Committee, is transferred to CSTB.

## **2.2. The standards and complementary specifications**

For linoleum products, E2 class can only be achieved for thermo-glued products on junction between rolls or tiles/planks and with a laying method that ensure the watertightness. Otherwise, the product is E1 classified.

### **2.2.1. APPLICABLE STANDARDS**

- NF EN 686, June 2019: Specification for plain and decorative linoleum on a foam backing,
- NF EN ISO 24011, March 2013: Specification for plain and decorative linoleum.

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## **2.2.2. SPECIFIC ELEMENTS REGARDING TEST METHODS**

Determination of the thickness of layers for PVC floor coverings (according to NF EN ISO 24340):

It is possible to certify products with a wear layer composed of multiple layers (coloured or not), which do not respect the minimum thickness of wear layer requirements by themselves.

They must meet the following requirements:

- The product can only request a U4P3EXCX and U3P3EXCX classification;
- the coloured layer shall be positioned under the transparent layer;
- the nominal thickness of the transparent layer must be at 0,35 mm or above for U4P3EXCX classification and 0,33 mm or above for U3P3EXCX classification;
- the layers must be mechanically inseparable;
- the formula between two layers cannot differ more than 5% of pigment.

Therefore, if the measurement cannot be performed (ex: same layer colours, same aspect...), the manufacturer has to implement a way to distinguish the layers (ex: colour one of the layers).

The possibilities to use the production records or to consider the product as homogeneous are not admitted.

It is possible to establish one certificate for identical product with transparent and coloured wear layer as long as it does not exceed 5% of pigment in the composition of the wear layer between the two products. At the admission audit and for the follow-up, an inspection of the wear layer composition, for this kind of product, will be made in order to confirm that the percentage of pigment added is lower than 5%.

For all the product concerned by this reference system, the factory finish is not considered as part of the wear layer. Thus, it is not included in the measurement of the wear layer thickness.

## **2.2.4. COMPLEMENTARY SPECIFICATIONS**

Some requirements are based on specific tests to UPEC classification. All the complementary testing methods are described in §2 “Standardised testing method” and §3 “Complementary testing method” of the Technical document 99030-01.

## **2.2.5. INSTALLATION RULES IN APPLICATION**

Installation rules in application for resilient floor coverings is the NF DTU 53.12 – Travaux de bâtiment – Préparation du support et revêtements de sol souples.

## **2.4.2. MINIMUM REQUIREMENTS FOR QUALITY MANAGEMENT**

### **(3) Inspection during production and on finished products**

#### On finished products

Each characteristic on the following tables must be controlled according to one of the lines corresponding to the characteristic. Otherwise, controls made on finished products will not be considered as conform to the requirements.

In the case where the manufacturing frequency of a product does not allow to meet the requirement (1 per month for example), the test will be carried out on the next production.

The welding test can be subcontracted externally.

**PLAIN AND DECORATIVE LINOLEUM (ISO 24011)**

Characteristic	Test method	Approbation of new products according to		Production inspections			
		internally correlated method <sup>(1)</sup>	reference method	According to internal method		According to reference method	External Sub-contracting Y/N
				Non-correlated	Correlated <sup>(1)</sup>		
Identification test	NF EN ISO 26985		X			MAICC	No
Rolls length and width	NF EN ISO 24341		X				No
Dimension, straightness and squareness of tiles and planks	NF EN ISO 24342		X		Each production	MAICC	No
						Each production and MAICC	
Total thickness	NF EN ISO 24346		X	High frequency <sup>(3)</sup>		MAICC	No
					High frequency <sup>(3)</sup>	MAICC	
						Each production, 25 000 m <sup>2</sup> and MAICC	
Thickness of layers	NF EN ISO 24340		X	High frequency <sup>(3)</sup>		MAICC	No
					High frequency <sup>(3)</sup>	MAICC	
						Each production, 25 000 m <sup>2</sup> and MAICC	
Mass per unit area	NF EN ISO 23997		X	High frequency <sup>(3)</sup>		MAICC	No
					High frequency <sup>(3)</sup>	MAICC	
						Each production, 25 000 m <sup>2</sup> and MAICC	
Colour fastness	NF EN ISO 105-B02	X			MAICC		Yes
Flexibility of rolls	NF EN ISO 24344 Method A		X			1 each month and MAICC	Yes
Dimensional stability in submersion	M.3 of TD 99030-01		X			MAICC	Yes
Residual indentation	NF EN ISO 24343-1		X			1 each month and MAICC	No
Castor chair test (W type)	ISO 4918		X			1 each year and MAICC	Yes

<sup>(1)</sup> correlated method: initial study + annual crossed test with reference method

<sup>(2)</sup> MAICC: modification with incidence to this characteristic (the manufacturer should prove the non-incidence)

<sup>(3)</sup> High frequency: one test every 1000m<sup>2</sup> produced.

**Addendum no. 01 to the QB 30 Certification Reference System – Resilient floor coverings**

**Revision no.: 08**

**PLAIN AND DECORATIVE LINOLEUM ON A FOAM BACKING (EN 686)**



Characteristic	Test method	Approbation of new products according to		Production inspections			
		internally correlated method <sup>(1)</sup>	reference method	Selon méthode interne		Selon méthode de référence	internally correlated method <sup>(1)</sup>
				Non corrélée	Corrélée <sup>(1)</sup>		
Identification test	NF EN ISO 26985		X			MAICC	No
Rolls length and width	NF EN ISO 24341		X				No
Dimension, straightness and squareness of tiles and planks	NF EN ISO 24342		X		Each production	MAICC	No
						Each production, 25 000 m <sup>2</sup> and MAICC	
Total thickness	NF EN ISO 24346		X	High frequency <sup>(3)</sup>		MAICC	No
					High frequency <sup>(3)</sup>	MAICC	
						Each production, 25 000 m <sup>2</sup> and MAICC	
Thickness of layers	NF EN ISO 24340		X	High frequency <sup>(3)</sup>		MAICC	No
					High frequency <sup>(3)</sup>	MAICC	
						Each production, 25 000 m <sup>2</sup> and MAICC	
Mass per unit area	NF EN ISO 23997		X	High frequency <sup>(3)</sup>		MAICC	No
					High frequency <sup>(3)</sup>	MAICC	
						Each production, 25 000 m <sup>2</sup> and MAICC	
Colour fastness	NF EN ISO 105-B02	X			MAICC		Yes
Flexibility of rolls	NF EN ISO 24344 Method A		X			1 each month and MAICC	Yes
Peel resistance	NF EN ISO 24345					1 each month and MAICC	No
Dimensional stability in submersion	M.3 of TD 99030-01		X			MAICC	Yes
Residual indentation	NF EN ISO 24343-1		X			1 each month and MAICC	No
Castor chair test (W type)	ISO 4918		X			1 each year and MAICC	Yes
Impact acoustic efficiency ( $\Delta L_w \geq 15$ dB)	TD 99030-01 § 1.2 maintained laying		X			Each production, 12 500m <sup>2</sup> and MAICC	Yes
						1 each month if the foam underlayer controls are satisfying for CSTB	

<sup>(1)</sup> correlated method: initial study + annual crossed test with reference method

<sup>(2)</sup> MAICC: modification with incidence to this characteristic (the manufacturer should prove the non-incidence)

<sup>(3)</sup> High frequency: one test every 1000m<sup>2</sup> produced.



**Conditions of controls of the acoustic efficiency  $\Delta Lw$  and  $L_{n,e,w}$ , for production controls**

‘MAINTAINED’ tests		
	Impact acoustic efficiency	Walk noise
Results	$\Delta Lw_{mf1}$	$L_{n,e,w_{mf1}}$
Interpretation	Si $\Delta Lw_{mref} - \Delta Lw_{mf1} \leq 1 \text{ dB} \Rightarrow$ conform Si $\Delta Lw_{mref} - \Delta Lw_{mf1} > 1 \text{ dB} \Rightarrow$ counter-test	$L_{n,e,w_{mf1}} < 67 \text{ dB} \Rightarrow$ conform $L_{n,e,w_{mf1}} \geq 67 \text{ dB} \Rightarrow$ counter-test
Batch	1 batch	
Samples	3 maintained specimens	

‘GLUED DOWN’ tests (if counter-test)		
	Impact acoustic efficiency	Walk noise
Results	$\Delta Lw_{cf}$	$L_{n,e,w_{cf}}$
Interpretation	Si $\Delta Lw_{c1(ou\ c2)} - \Delta Lw_{cf} \leq 2 \text{ dB} \Rightarrow$ conform Si $\Delta Lw_{c1(ou\ c2)} - \Delta Lw_{cf} > 2 \text{ dB} \Rightarrow$ non-conform	$L_{n,e,w_{cf}} < 67 \text{ dB} \Rightarrow$ conform $L_{n,e,w_{cf}} \geq 67 \text{ dB} \Rightarrow$ non-conform
Samples	1 batch	
Samples	3 glued down specimens	

Légende		
$\Delta Lw_r$		$\Delta Lw$ declared by the applicant
$\Delta Lw_{c1}$	$L_{n,e,w_{c1}}$	average for 6 specimens glued, calculated during the admission
$\Delta Lw_{c2}$	$L_{n,e,w_{c2}}$	average of 12 specimens glued, after check test during the admission
$\Delta Lw_{certifié}$	$L_{n,e,w_{certifié}}$	certified value
$\Delta Lw_{mref}$		average for 3 specimens maintained, calculated during the admission
$\Delta Lw_{mf1}$	$L_{n,e,w_{mf1}}$	average for 3 specimens maintained, calculated during the annual supervision
$\Delta Lw_{cf}$	$L_{n,e,w_{cf}}$	average of 3 specimens glued, after check test during the annual supervision

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**(4) Exploitation of results**

The test results (except furniture leg + water spread) should be submitted for exploitation by the operator or his responsible for verification of the conformity with internal specifications and specifications of these rules at latest 8 working days after sampling in the production. This period starts when the product arrives to the packaging phase.

### **3.3. Audits**

#### **3.3.1. ADMISSION AUDITS**

The purpose of audits is to make sure that the measures defined and implemented by the applicant in the manufacturing unit meet the requirements in Part 2 of this certification reference system, the Technical document 99030-01, the administrative management appendix and the addendum to the reference system QB 30 no.1.

In order to confirm that the applicant meet the requirement of information given to customers, an audit may be conducted at the head office of the company, when the manufacturing unit do not have this responsibility. The audit lasts a half-day at maximum and is made remotely.

When a new representative makes a certification request for an already certified factory by CSTB, an admission audit is performed for this new representative-factory couple. This audit can be made with a follow-up audit of another representative-factory couple. A half supplementary day can be added depending on the audit scope.

#### **3.3.2. FOLLOW-UP AUDITS**

The follow-up audits are intended to check, following admission, that the provisions defined are still being maintained and continue to meet the requirements in Part 2 of this certification reference system, the Technical document 99030-01, the administrative management appendix and the addendum to the reference system QB 30 no.1.

In order to confirm that the applicant meet the requirement of information given to customers, an audit may be conducted at the head office of the company, when the manufacturing unit do not have this responsibility. The audit lasts a half-day at maximum and is made remotely.

A follow-up audit of a factory with a representative can be made at the same time as the admission audit of another representative. A half supplementary day can be added depending on the audit scope.

### **3.4. Sampling**

The samples taken are marked with a distinctive symbol by the auditor and are sent by and under the responsibility of the applicant to the laboratory of the mark responsible for carrying out the tests within the deadline set during sampling, unless the auditor decides to take charge of them.

An information sheet recording the samplings carried out is prepared on site and handed over to the applicant/holder. A copy of this sampling sheet is systematically sent to the laboratory in charge of carrying out the tests.

It is accepted that if these samples cannot be taken, the holder will send the samples requested by CSTB to the mark's laboratory, within the time required. If the holder does not send the samples to the mark's laboratory within the time required by CSTB, penalties may be applied to him (sanction, suspension).

In the case of a certified products storage where it is not possible to take samples during the audit (separate site or logistic support is not able to obtain the samples in time to do the required factory tests), the sampling on list can be performed 7 days before the audit.

### **Sampling**

The specimens are distributed in all the available samples in order to reflect the average quality of the product as far as possible.

For rolls, about one third of specimens are taken near the edges, the distance between the outer edge of the sample and the edge closest to the sample should be 100 mm at least.

### **Case of admission sampling:**

The auditor takes samples from the stock to make necessary tests: at least 3 batches of 10 m<sup>2</sup> for a product which have an acoustic efficiency or, where required, at least 2 batches of 10m<sup>2</sup>.

Among these rolls, the auditor check that at least 1 batch per technical design (coloured, transparent or with inclusion) are sampled. The design with the highest inclusion ratio will be chosen as the representative of the 'with inclusion' technical design. Moreover, when several total thicknesses are available for a same commercial name, one batch of each thicknesses will be sampled.

Example: the product A is available in two different thicknesses with two different design technics on each total thicknesses. Four batches will have to be taken by the auditor as followed

Product A	Coloured design	With inclusion design
Thickness 1	1 batch	1 batch
Thickness 2	1 batch	1 batch

When the sampling concerns a linoleum certification request, 2 linear meters of filler cord is also taken.

### **Case of sampling made during distributor's supervision visit:**

The auditor can take samples in case of breach of compliance with these rules.

### **Case of follow-up sampling:**

Samplings for the follow-up of a manufacturing unit are made in order to test at CSTB all certified products within 5 years, with one product per family taken for tests each year. At least two batches of 10 m<sup>2</sup> are sampled per product.

Among these rolls, the auditor check that at least 1 batch per technical design (coloured, transparent or with inclusion) are sampled. The design with the highest inclusion ratio will be chosen as the representative of the 'with inclusion' technical design. Moreover, when several total thicknesses are available for a same commercial name, one batch of each thicknesses will be sampled.

Example: the product A is available in two different thicknesses with two different design technics on each total thicknesses. Four batches will have to be taken by the auditor as followed

Product A	Coloured design	With inclusion design
Thickness 1	1 batch	1 batch
Thickness 2	1 batch	1 batch

When the sampling concerns a linoleum certification request, 2 linear meters of filler cord is also taken.

When modifications declared as minor have been made to the products or when changes also declared as minor have been made to the production process for the products and the holder cannot prove that these changes do not affect the certified characteristics, samples are systematically taken and tests are to be performed in the mark's laboratory, in particular to check the characteristics involved.

In the case of an additional visit, the tests concerned by the detected non-conformity are realized by the mark laboratory.

**Case of extension sampling:**

The applicant sends samples necessary for the tests: at least 3 batches of 10 m<sup>2</sup> for a product with an acoustic efficiency or, where required, at least 2 batches of 10m<sup>2</sup>.

Among these rolls, the auditor check that at least 1 batch per technical design (coloured, transparent or with inclusion) are sampled. The design with the highest inclusion ratio will be chosen as the representative of the 'with inclusion' technical design. Moreover, when several total thicknesses are available for a same commercial name, one batch of each thicknesses will be sampled.

Example: the product A is available in two different thicknesses with two different design technics on each total thicknesses. Four batches will have to be taken by the auditor as followed

Product A	Coloured design	With inclusion design
Thickness 1	1 batch	1 batch
Thickness 2	1 batch	1 batch

When the sampling concerns a linoleum certification request, 2 linear meters of filler cord is also taken.

### **3.5. Tests**

#### **3.5.1. ADMISSION/EXTENSION TESTS**

Homogeneous products with a foam layer, considered as NF EN 651 products, must pass the tensile strength test and respect the requirement stated inside NF EN ISO 10581 standard. This test is made on the wear layer.

When a non-conformity is found for dimensions, straightness and squareness test, the counter-test must be performed on the same dimension.

When a certification request is made for stairs products, tests and specifications of the family product are applicable, except for castor chair and furniture leg tests, which cannot be made on such products. Conformity to the standard will not be delivered for them.

Characteristics		Test method	NF EN ISO 24011	NF EN 686
Identification test		NF EN ISO 26985	2 batches	
Dimension, straightness and squareness of tiles and planks		NF EN ISO 24342		
Total thickness		NF EN ISO 24346		
Thickness of layers		NF EN ISO 24340		
Mass per unit area		NF EN ISO 23997		
Flexibility of rolls		NF EN ISO 24344		
Peel resistance		NF EN ISO 24345		2 batches
Dimensional stability in submersion		M.3 TD 99030-01	1 batch	
Residual indentation		NF EN ISO 24343-1	2 batches	
Castor chair (H type wheels)		ISO 4918	2 batches	
Acoustic efficiency to noise impact (if claimed UPEC.A)	$\Delta L_{wr} \geq 15$ dB	NF EN ISO 717/2		3 batches
$\Delta L_{wr} = \Delta L_w$ claimed				

### 3.5.2. TESTS ON THE CERTIFIED PRODUCT (FOLLOW-UP)

In the case where some non-conform results are detected following the follow-up sampling, a check test will be performed in the laboratory of the mark on two new batches sampled by the certification manager from the stock list. The delivery of new batches after 3 months (from the sending of test report) or non-conform results of the second check test will lead to the suspension of the right to use for the concerned product.

In case of non-conformity on the dimension, straightness and squareness test, the counter-test must be performed on the same dimension.

When a certification request is made for stairs products, tests and specifications of the family product are applicable, except for castor chair and furniture leg tests, which cannot be made on such products.

Characteristic	Test method	NF EN ISO 24011		NF EN 686	
		Factory <sup>(1)</sup>	CSTB <sup>(2)</sup>	Factory <sup>(1)</sup>	CSTB <sup>(2)</sup>
Identification test	NF EN ISO 26985		X		X
Dimension, straightness and squareness of tiles and planks	NF EN ISO 24342	X		X	
Total thickness	NF EN ISO 24346	X		X	
Thickness of layers	NF EN ISO 24340	X		X	
Mass per unit area	NF EN ISO 23997	X		X	
Dimensional stability in submersion	M.3 TD 99030-01		X		X
Residual indentation	NF EN ISO 24343-1	X	X <sup>(3)</sup>	X	X <sup>(3)</sup>
Castor chair (H type wheels)	ISO 4918		X		X
Acoustic efficiency to noise impact (if UPEC.A)	NF EN ISO 717/2				X
<p><sup>(1)</sup> the conditioning of samples for the tests in factory are reduced at 12 hours (instead of 24 hours).</p> <p><sup>(2)</sup> the tests which couldn't be realized in the factory and the tests realized in factory which result in non-conformity are repeated in the laboratory of the mark.</p> <p><sup>(3)</sup> 1 minimum batch tested at CSTB.</p>					

## Part 5 Glossary

<b>Transparent wear layer:</b>	The upper layer of a floor covering, without any trace of pigmentation.
<b>Coloured wear layer:</b>	Layer of the product, where the formula does have pigments, which can be directly exposed or under a transparent wear layer.
<b>Multiple wear layer, surface layer:</b>	Layer made of multiple layers (transparent on the top of a coloured layer) where the composition between the two does not exceed from more than 5% in pigments. Both layers are then considered as homogeneous and constitute the wear layer. The factory finish (lacquer) is included in the surface layer.
<b>Plank:</b>	Plank is a rectangular dimension with a ratio length divided by width between 3 and 10. The minimum width is 8 cm.
<b>External subcontract:</b>	Applies to tests made by an external laboratory (third part) or by another laboratory of the same group as the factory is part of (example: central laboratory).