



TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.
Technical and Test Institute for Construction Prague

Akreditovaná zkušební laboratoř, Autorizovaná osoba, Certifikační orgán, Notifikovaná osoba, Inspekční orgán
Accredited Testing Laboratory, Authorized Body, Certification Body, Notified Body, Inspection Body
Prosecká 811/76a, 190 00 Praha 9 - Prosek, Czech Republic

Authorized Body 204

Notified Body 1020

Branch 0100 - Praha

REPORT

on the initial type tests: reaction to fire, emission of formaldehyde

pursuant to Article 5 Clause 1 b) of the Czech Republic Government Decree No. 190/2002 Coll. (system of conformity assessment 3), and in compliance with the Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products (the Construction Products Directive or CPD), as later amended

No. 1020 - CPD – 010029480

Trade name:

Resilient floor coverings according to EN 14041:2004/AC:2006

Type/variation: **UNIDECO TILE, CLICK'N LOC**

Manufacturer:

KDF Co., LTD.

INo: 312-86-12761

Address: 513/1, Sinbong-ri, Yeongin-myeon, Asan-si, Chungnam, KOREA

Plant: KDF Co., LTD.

Address: 513/1, Sinbong-ri, Yeongin-myeon, Asan-si, Chungnam, KOREA

Order: Z010110401

Number of Report pages including title page: 4

Number of Annexes: 3

This Report is only a part of the complete initial type-testing report.

The person taking responsibility for the content of this report:

Cinařová
Ing. Lucie Cinařová
Head Assessor

The person taking responsibility for correctness of this report:

Stamp of Notified body 1020

Praha, February 15, 2012



Jiroutová
Ing. Iveta Jiroutová
Deputy Manager of the Notified Body 1020

Note: This Report may not be reproduced otherwise but complete without a written consent of the notified body deputy manager.

Technical and Test Institute for Construction Prague, branch 0100 - Praha, Prosecká 811/76a, 190 00 Praha 9, Czech Republic
Phone: +420 286 019 400, +420 286 885 548, fax: +420 286 891 393, e-mail: info@tzus.cz, <http://www.tzus.cz>
Bank connection: KB Praha 1 Czech Republic, account No.: 1501-931/0100, ID: 000 15679, VAT: CZ00015679

1 Specification of tested subject

Resilient floor coverings Unideco Tile and Click'n Loc are used as floor coverings into the interiors of buildings.

Technical specification:

- EN 14041: 2004/AC:2006 Resilient, textile and laminate floor coverings - Essential characteristics

Manufacturer: KDF Co., LTD.
513/1, Sinbong-ri, Yeongin-myeon, Asan-si, Chungnam, KOREA

Plant: KDF Co., LTD.
513/1, Sinbong-ri, Yeongin-myeon, Asan-si, Chungnam, KOREA

2 Sampling

- Place of sampling: dispatch store of the manufacturer KDF Co., LTD.
- Sampler: Mr. C.S. Jeong (KTR, 88, 8Ga, Youngdungpo-Dong, Youngdungpo-Gu, Seoul, Korea)
- Sampling method: original undisturbed packing
- Transport mode: DHL
- Date of the taking over: 23.11.2011
- Sample registration numbers: 401/11A, 401/11B

3 Test results

3.1 Reaction to fire

Determination according to test methods:

- ČSN EN ISO 9239-1:2003 Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source
- ČSN EN ISO 11925-2:2010 Reaction to fire tests - Ignitability of building products subjected to direct impingement of flame - Part 2: Single-flame source test

Classification according to:

- ČSN EN 13501-1+A1:2010 Fire classification of construction products and building elements - Part 1: Classification using test data from reaction to fire tests

Tests were carried out by: Vít Slaboch, Centrum stavebního inženýrství, a.s.; Pražská 16, 10200, Praha 10, Accr.T.Lab. No. 1007.7

- Test Report No.15839 – 1/2 on Fire and Technical Characteristics, dated 2012-01-30, issued by CSI, a.s.; Fire technical laboratory, Authorized Body AO 212
- Test Report No.15839 – 2/2 on Fire and Technical Characteristics, dated 2012-02-07, issued by CSI, a.s.; Fire technical laboratory, Authorized Body AO 212
- Test Report No.15840 – 1/2 on Fire and Technical Characteristics, dated 2012-01-30, issued by CSI, a.s.; Fire technical laboratory, Authorized Body AO 212
- Test Report No.15840 – 2/2 on Fire and Technical Characteristics, dated 2012-02-07, issued by CSI, a.s.; Fire technical laboratory, Authorized Body AO 212

Date of the test ending: 3.02.2012

a) Unideco TileSurface weight: 4670 g/m²

Thickness: 3,0 mm

Reaction-to-fire classification report: PK-12-015

Testing Procedure	Parameter	Number of tests	Results	
			Average continuous parameter	Compliance parameter
ČSN EN ISO 9239-1	Critical heat flow CHF (kW/m ²)	3	8,4	B _f ≥ 8,0
	Darkening-by-smoke integral	3	555,8	s1 ≤ 750
	S(% . min)			
ČSN EN ISO 11925-2	Propagation of flame (mm)	6	0	≤ 150 to 20 s

Reaction to fire class: **B_f**Classification in relation to smoke production: **s1**

Reaction to fire	B_f-s1
-------------------------	-------------------------

b) Click'n LocSurface weight: 8670 g/m²

Thickness: 5,0 mm

Reaction-to-fire classification report : PK-12-016

Testing Procedure	Parameter	Number of tests	Results	
			Average continuous parameter	Compliance parameter
ČSN EN ISO 9239-1	Critical heat flow CHF (kW/m ²)	3	8,8	B _f ≥ 8,0
	Darkening-by-smoke integral	3	604,9	s1 ≤ 750
	S(% . min)			
ČSN EN ISO 11925-2	Propagation of flame (mm)	6	0	≤ 150 to 20 s

Reaction to fire class: **B_n**

Classification in relation to smoke production: **s1**

Reaction to fire	B_n-s1
------------------	-------------------------

3.2 Emission of formaldehyde

The evaluation was performed without testing under the condition that no formaldehyde was added during the manufacturing process of all floor coverings (see Art. 1 of this report) – according to Art. 4.3 of the standard EN 14041

Classification	E1	Written declaration of the manufacturer*
----------------	-----------	--

*the manufacturer submitted the composition table of the products to the Notified Body

4 Annexes

- Classification of reaction to fire in accordance with 13501-1+A1:2010, No. PK-12-015, dated 2012-02-10, issued by CSI, a.s.; Fire technical laboratory, Authorized Body AO 212
- Classification of reaction to fire in accordance with 13501-1+A1:2010, No. PK-12-016, dated 2012-02-10, issued by CSI, a.s.; Fire technical laboratory, Authorized Body AO 212
- Declaration of Producer (formaldehyde) - KDF Co., LTD., dated 14.12.2011

**Centrum stavebního inženýrství a.s.****Fire Technical Laboratory****AUTHORIZED
BODY No. 212****NOTIFIED
BODY No. 1390****CLASSIFICATION OF REACTION TO FIRE IN
ACCORDANCE WITH
ČSN EN 13501-1+A1:2010**

Applicant: Technický a zkušební ústav stavební
Praha, s.p.
Prosecká 811/76a
190 00 Praha 9
Czech republic

Prepared by: Centrum stavebního inženýrství a.s.
Pražská 16
102 00 Praha 10
Czech republic

Product name: UNIDECO TILE (0.3/3.0T)

**Classification
report No.:** PK-12-015

Issue number: 1/2

Date of issue: 10th February 2012

This classification report consists of 4 pages and may only be used or reproduced in its entirety.

1. DETAILS OF CLASSIFIED PRODUCT

Nature and end use application:

Classification of the product *UNIDECO TILE (0.3/3.0T)* is valid for the following end use application:

Floor covering

Description:

The product *UNIDECO TILE (0.3/3.0T)* is fully described in the test reports in support of the classification listed in clause 2.

2. TEST REPORTS AND TEST RESULTS IN SUPPORT OF THIS CLASSIFICATION

Test reports

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
CSI a.s., Fire technical laboratory	TZÚS Praha, s.p.	15839 – 1/2	ČSN EN ISO 11925-2
		15839 – 2/2	ČSN EN ISO 9239-1

Measured values

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
ČSN EN ISO 11925-2 surface flame attack	$F_s \leq 150 \text{ mm}$	6	(-)	yes
ČSN EN ISO 9239-1	CHF (kW/m ²)	3	8,4	(-)
	Smoke (% × min)	3	555,8	(-)

(-): not applicable

Test results

Test method	Parameter	Mean value	Criterion compliance
ČSN EN ISO 11925-2	$F_s \leq 150 \text{ mm (1)}$	yes	yes (B_{fl} to D_{fl})

(1): until 20. second from the start of exposition

Test results

Test method	Parameter	Mean value	Criterion compliance
ČSN EN ISO 9239-1	CHF (kW/m ²) Smoke (% x min)	8,4 555,8	≥ 8,0 (B _f) ≤ 750 (s1)

3. CLASSIFICATION AND DIRECT FIELD OF APPLICATION**Reference and direct field of application**

This classification has been carried out in accordance with the clauses 12.6 and 12.9.2 of ČSN EN 13501-1+A1:2010.

Classification

The product *UNIDECO TILE (0.3/3.0T)*, in relation to its reaction to fire behaviour is classified:

B_f

The additional classification in relation to smoke production is:

s1

The format of the reaction to fire classification for *UNIDECO TILE (0.3/3.0T)* is:

Fire behaviour		Smoke production	
B _f	-	s	1

Reaction to fire classification: B_f-s1

Field of application

This classification is valid for the following end-use conditions:

- substrate: products of reaction to fire class A1_{f1} or A2_{f1}
- fixing method: glued with polyurethane or dispersion adhesives

4. LIMITATIONS**Restrictions**

This classification report is valid until 10th February 2017, provided that the technical specifications of the product will not be changed.

Warning

This document does not represent type approval or certification of the product.

Prepared:

Jiří Socha

**Reviewed:**

Vít Slaboch
head of laboratory

**Centrum stavebního inženýrství a.s.****Fire Technical Laboratory****AUTHORIZED
BODY No. 212****NOTIFIED
BODY No. 1390****CLASSIFICATION OF REACTION TO FIRE IN
ACCORDANCE WITH
ČSN EN 13501-1+A1:2010**

Applicant: Technický a zkušební ústav stavební
Praha, s.p.
Prosecká 811/76a
190 00 Praha 9
Czech republic

Prepared by: Centrum stavebního inženýrství a.s.
Pražská 16
102 00 Praha 10
Czech republic

Product name: CLICK'N LOC (0.5/5.0T)

**Classification
report No.:** PK-12-016

Issue number: 1/2

Date of issue: 10th February 2012

This classification report consists of 4 pages and may only be used or reproduced in its entirety.

1. DETAILS OF CLASSIFIED PRODUCT

Nature and end use application:

Classification of the product *CLICK'N LOC (0.5/5.0T)* is valid for the following end use application:

Floor covering

Description:

The product *CLICK'N LOC (0.5/5.0T)* is fully described in the test reports in support of the classification listed in clause 2.

2. TEST REPORTS AND TEST RESULTS IN SUPPORT OF THIS CLASSIFICATION

Test reports

Name of laboratory	Name of sponsor	Test report ref. no.	Test method
CSI a.s., Fire technical laboratory	TZÚS Praha, s.p.	15840 – 1/2	ČSN EN ISO 11925-2
		15840 – 2/2	ČSN EN ISO 9239-1

Measured values

Test method	Parameter	Number of test	Results	
			Continuous parameter mean (m)	Compliance parameters
ČSN EN ISO 11925-2 surface flame attack	$F_s \leq 150 \text{ mm}$	6	(-)	yes
ČSN EN ISO 9239-1	CHF (kW/m ²)	3	8,8	(-)
	Smoke (% × min)	3	604,9	(-)

(-): not applicable

Test results

Test method	Parameter	Mean value	Criterion compliance
ČSN EN ISO 11925-2	$F_s \leq 150 \text{ mm}$ (1)	yes	yes (B _{f1} to D _{f1})

(1): until 20. second from the start of exposition

Test results

Test method	Parameter	Mean value	Criterion compliance
ČSN EN ISO 9239-1	CHF (kW/m ²) Smoke (% x min)	8,8 604,9	≥ 8,0 (B _{f1}) ≤ 750 (s1)

3. CLASSIFICATION AND DIRECT FIELD OF APPLICATION**Reference and direct field of application**

This classification has been carried out in accordance with the clauses 12.6 and 12.9.2 of ČSN EN 13501-1+A1:2010.

Classification

The product *CLICK'N LOC (0.5/5.0T)*, in relation to its reaction to fire behaviour is classified:

B_{f1}

The additional classification in relation to smoke production is:

s1

The format of the reaction to fire classification for *CLICK'N LOC (0.5/5.0T)* is:

Fire behaviour		Smoke production	
B _{f1}	-	s	1

Reaction to fire classification: B_{f1}-s1

Field of application

This classification is valid for the following end-use conditions:

- substrate: products of reaction to fire class A1_{fl} or A2_{fl}

4. LIMITATIONS

Restrictions

This classification report is valid until 10th February 2017, provided that the technical specifications of the product will not be changed.

Warning

This document does not represent type approval or certification of the product.

Prepared:



.....
Jiří Socha



Reviewed:



.....
Vít Slaboch
head of laboratory



Head Office / Factory : 513-1, Sinbong-ri, Yeongin-myeon, Asan-si, Chungnam, KOREA
Phone : +82-41-549-0311 FAX : +82-41-549-0318 URL : www.ikdf.co.kr

Doc. # KDF-2011-12-01

Date 14th. December. 2011

Attn to: Ms. L. Cinarova

T Z U S

(TECHNICKÝ A ZKUŠEBNÍ ÚSTAV STAVEBNÍ PRAHA, s.p.)

Prosecká 811/76 a,
Prague 9 - Prosek 190 00

Re : The Declaration of Formaldehyde Free

Dear Sir.

We declare that no formaldehyde was added during the manufacturing process of every type as the following products list.

- UNIDECO TILE
- CLICK'N LOC

Manufacturers Registered Name : **KDF Co., Ltd.**

Manufacturers Registered Address : **513-1, Sinbong-ri, Yeongin-myeon, Asan-si, Chungnam, KOREA**

Thanks for your cooperation.

With Best Regards.

A handwritten signature in black ink, appearing to read '7/15/12' followed by a stylized signature.

Mr. KIM YOUNG IL
CEO of KDF CO., LTD.