Short summary of test report no. 53834

(according prEN 15114:2006)

Name of quality:	**"EPOCA PRO"**
Manufacturer/applicant	**Egetaepper A/S**

IDENTIFICATION, BASIC INFORMATION AND USE CLASSIFICATION			
Type of manufacture	M1: woven	Type of surface	A10: ribbed
Basic requirements (Tab.4EN 1307:2004)	pass	Secondary backing	S8: woven textile backing (synthetic)
Primary backing	- - -	Dimensions	wall-to-wall
Colouring	coloured unpatterned	Yarn type	BCF
Pile fibre composition	F1: polyamide	Surface pile thickness:	- - -
Total thickness (mm)	4,2	Surface pile mass (g/m^2)	- - -
Total carpet mass (g/m^2)	2144	Number of tufts per m^2	- - -
Surface pile density (g/cm^3)	- - -	Foam/felt Thickness	- - -
Surface treatment for antistatic characteristics	yes	Foam/felt apparent density	- - -
Drum test Vetterman short term	5,0	Drum test Vetterman long term	4,5
Performance in appearance retention	class 33	Wear performance	class 33
Test done on an underlay	yes	Wear performance (Wear index)	- - -
Luxury class	**class LC1**	**Overall use class**	**class 33**

The tests were done without underlay.

ADDITIONAL CHARACTERISTICS			
Castor chair suitability (r)	A (4,0)	Stair suitability	commercial
Thermal resistance (m^2 K/W)	- - -	Suitable for underfloor heating	- - -
Insulation from impact noise Δ Lw	- - -	Acoustical absorption calculated	- - -
Body voltage walking test (kV)	+ 1,7	Acoustical absorption average	- - -
Vertical resistance (Ω)	$9{,}2 \cdot 10^{11}$	Horizontal resistance (Ω)	$5{,}6 \cdot 10^{11}$
Incidental humid conditions suitability	- - -	Resistance to fraying	- - -
SPECIFIC INFORMATION CARPET TILES			
Non adhered/loose laid	- - -	Dimensions of the tile (cm)	- - -
Adhered removable	- - -	Total mass individual tile (kg)	- - -
For permanent bonding	- - -	Total mass per unit area (kg/m^2)	- - -
Basic requirements Annex A table A3	- - -		

The manufacturer ensures that the quality complies with the requirements for colour fastness. The use properties, mentioned in this summary, are valid for the samples tested; it is the responsibility of the producer to guarantee that the production tolerances on the identification parameters are within the values stated in EN 1307:2005.

Responsible for testing laboratory
(Ing. Hannes Vittek)

Responsible for technical group
(Ing. Hanspeter Bauer)

ÖTI Flooring Technology

Wien, 11.12.2006

Report 53834

Test Report

Applicant

EGETAEPPER A/S
Industrivej Nord 25
7400 Herning
DÄNEMARK

Reference

Fr. Ormstrup

Application

Testing and classification according prEN 15114:2006, stair and castor chair suitability, electrical propensity and vertical resistance.

Test Material

"EPOCA PRO"

Material used in testing was anonymized for laboratory purposes. A detailed sample list is contained in the report.

Issuing and Signatures

Number of pages contained: 14

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Authorised for test laboratory,
Ing. Hannes Vittek .....

Authorised for technical group,
Ing. Hanspeter Bauer .....

Director,
Dipl.-Ing. Dr. Erich Zippel .....

Contents

1 Order

1.1 Chronology

Date	*Received*	*Order*
2006-10-23	2006-11-17	Testing and classification according prEN 15114:2006, stair and castor chair suitability, electrical propensity and vertical resistance.

1.2 Samples

No.	*Received*	*Sample Identification*	*Sample Material*
1	2006-11-17 (1)	"EPOCA PRO"	Textile floor covering, approx. 400 cm x 150 cm
2	2001-07-03 (1)	"EPOCA PRO"	Textile floor covering, approx. 400 cm x 200 cm

(1) Samples provided by the customer. (2) Sample drawn by ÖTI.

2 Preliminary Notes

Most of the tests were carried out with report number 39509 (dated 11th September 2001), these tests are identified in this report. With test report 39509 the specimen was named differently, but according to the information given by the applicant it is the same quality (construction and material).

3 Findings / Tests performed

3.1 Description of specimen

Description of specimen according to ISO 2424

Test Results

Tested sample: 1, 2

Dimensions:	rolls
Manufacturing procedure:	woven (flat)
Structure of face side:	rib structure
Coloration of face side:	unicoloured
Type of backing:	textile secondary backing
Type of fibres at face side *):	100 % polyamide (according to the specification by the applicant)

*) In accordance with the at present valid version of the appropriate European Directives; fibre materials less then 2 % are not considered

3.2 Determination of mass per unit area

Test conditions

According ISO 8543
Test atmosphere: 20° C / 65 % rel. humidity
Number of specimens: 4
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

Mass per unit area		
Mean value (g/m²)	Coefficient of variation (%)	Confidence interval (P = 95%) (g/m²)
2144	1,4	± 48

3.3 Determination of thickness

Test conditions

Testing according ISO 1765
Test atmosphere: 20° C / 65 % rel. humidity
Number of specimens: 4
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

Mass per unit area		
Mean value (mm)	Coefficient of variation (%)	Confidence interval (P = 95%) (mm)
4,2	0,5	± 0,1

3.4 Determination of colour-fastness to artificial light

Test conditions

According to EN ISO 105-B02
Test equipment: Xenotest 150 S+
Exposure method: methode 1
Kind of motion: Reversing motion
Effective humidity: 40 % / max. temperature of the black-panel-thermometer: 52 °C
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

Numerical rating of light-fastness: 6

Note: Light-fastness will be evaluated by a comparative scale, which consists of eight blue woollen fabrics, which are dyed gradated regarding their light-fastness and which will be treated under the same conditions as the specimen. It is given in figures, mark 1 thus represents very low and mark 8 very high light-fastness.

3.5 Determination of colour fastness to rubbing

Test conditions

According to EN ISO 105-X12
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

Staining of the cotton rubbing cloth:		
Colourfastness, dry rubbing:	Longitudinal direction:	Numerical rating: **5**
	Cross direction:	Numerical rating: **5**
Colourfastness, wet rubbing:	Longitudinal direction:	Numerical rating: **5**
	Cross direction:	Numerical rating: **5**

Note: Comment on assessment of colour fastness see enclosure.

3.6 Determination of colour fastness to water

Test conditions

According to EN ISO 105-E01
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

Staining of the cotton rubbing cloth:		
Change in colour:		Numerical rating: **5**
Staining of adjacent fabric:	- Adjacent fabric 1: polyamide	Numerical rating: **3**
	- Adjacent fabric 1: wool	Numerical rating: **2-3**

Note: Comment on assessment of colour fastness see enclosure.

3.7 Determination of hairiness (pilling)

Test Conditions

Testing according EN 1963, test D
Duration: 100 and 200 double passages

Test Results

Tested sample: 1

	Assessment of appearance according Photo standard	
	after 100 double passages	after 200 double passages
Total median	**5**	**4 ½**

3.8 Determination of the sensitivity to spilled water

Test conditions

According to prEN 15115
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

Change in colour:	**5**
Reason of the change of colour:	no colour change was determined

3.9 Determination of colour change due to subsequent soiling.

Test Conditions

According to prEN 15115 & Annex B
Applied test method: Test method B (Tetrapod)
Tested colours: Colour 1: beige
Deviation from standard: The test was performed only on one colour.
Pre-Treatment: Test according prEN 15115 and prEN 15114:2006 Annex C

Test Results

Tested sample: 1

	Grey scale rating
Median	4

3.10 Determination of Assessment of impregnations in needled floor coverings by means of a soiling test

Test Conditions

According to EN 1269
Applied test method: Test method B (Tetrapod)
Tested colours: Colour 1: beige / Colour 2: - - - / Colour 3: - - - / Colour 4: - - -
Deviation from standard: The test was performed only on one colour.
Note: The test was performed under report number 39509, dated 11th September 2001.

Test Results

Tested sample: 2

	Grey scale rating			
	colour 1	colour 2	colour 3	colour 4
Median	4	- - -	- - -	- - -

3.11 Determination of dimensional changes after exposure to heat and water

Test Conditions

According to ISO 2551
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

		Dimensional change (%)	
		length	cross
1. Treatment	1. Measurement	- 0,1	± 0,0
2 hours drying at 60 °C	2. Measurement	- 0,1	± 0,0
	3. Measurement	- 0,1	- 0,2
	Mean value	***- 0,1***	***- 0,1***
2. Treatment	1. Measurement	± 0,0	± 0,0
2 hours water 20 °C	2. Measurement	+ 0,1	± 0,0
	3. Measurement	+ 0,2	± 0,0
	Mean value	***+ 0,1***	***± 0,0***
3. Treatment	1. Measurement	- 0,4	± 0,0
24 hours drying at 60 °C	2. Measurement	- 0,3	± 0,0
	3. Measurement	- 0,3	± 0,0
	Mean value	***- 0,3***	***± 0,0***
4. Treatment	1. Measurement	- 0,5	± 0,0
48 hours standard climate	2. Measurement	- 0,4	± 0,0
	3. Measurement	- 0,4	± 0,0
	Mean value	***- 0,4***	***± 0,0***

Description of the final appearance: no deformation

Note: A plus sign (+) is used to indicate an increase and a minus sign (-) is used to indicate shrinkage in dimensions.

3.12 Determination of changes in appearance – Drum Test

Test conditions

According to EN 1307 and ISO/TR 10 361
Assessment according EN 1471
Number of drum revolutions: 5 000 and 22 000
Number of specimens: 1
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

	5 000 revolutions	**22 000 revolutions**
Index of appearance change (median):	5,0	4,5
Index of colour change (median):	5	4 - 5
Main reasons for change:	colour	colour
Index after colour correcture (median):	**5,0**	**4,5**
Index after colour correcture (mean):	**4,8**	**4,6**

Assessment indices: Index 1 – high change, Index 5 – no change

Damages by the treatment: none

3.13 Determination of the mass loss of textile floor coverings using the Lisson Tretrad machine

Test conditions

According to EN 1963, test A
Soles: Vulcanised SBR-rubbers with a wave profile
Number of treads: 1700
Adjustment of wheel height: - 5 mm
Number of specimens: 4
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

	Mass loss per unit area (m_V)	Relative mass loss (m_{rV})
Mean value	**no mass loss**	
Coefficient of variation		
Confidence interval (P = 95 %) absolute width		

Tretradindex: --

3.14 Determination of general structural integrity

Test conditions

Testing according: EN 985, test C
Test apparatus: castor chair test equipment from Feingerätebau Baumberg
Typ of castors: steering single-roll, type H

Test Results

Tested sample: 1

Duration	10 000 cycles	25 000 cycles
Damages by the treatment	none	none

3.15 Determination of the basic requirement of textile floor coverings without pile

Test conditions

According to prEN 15114:2006

Test results

Tested sample: 1, 2

		Requirements	Test results	
Colour fastness to				
Light [a]		≥ 5 (Pastel shade ≥ 4 [b])	6	
Rubbing	- wet	≥ 3	5	
	- dry	≥ 3 - 4	5	
Water (change in colour)	- plain carpets	≥ 3 - 4	5	
	- other carpets	≥ 4		
Water (staining)	- all carpets	≥ 2 – 3 [c]	2 - 3	
Hairness (pilling) [e]		≥ 2,5	4 ½	
Colour change [d]	- due to spilled water	≥ 4	5	
	- due subsequent soiling	≥ 3	4	
Dimensional stability [f]			length	cross
- Shrinkage (in each direction)		≤ 1,2 %	- 0,4	-0,1
- Extension (in each direction)		≤ 0,5 %	none	

a) Conformity to be declared the manufacturer for each colour.
b) Pastel shade: colour corresponding to a standard depth < 1/12 (in accordance with EN ISO 105-A01)
c) On multifibre: worst result.
d) Conformity to be declared by the manufacturer
e) Tested production-wise and cross-wise, worst result decisive
f) not applicable to tiles

Judgement

The tested material **fulfills** the basic requirements of textile floor coverings without pile according to prEN 15144:2006, point 4.1.

3.16 Classification of textile floor coverings without pile

Test conditions

According to prEN 15114:2006

Test results

Tested sample: 1, 2

Classification requirements for change in appearance		
- Drum test (Vettermann):		
Short term	(5.000 turns)	5,0
Long term	(22.000 turns)	4,5
Classification requirements for wear		
- Mass loss per unit area m_v	(g/m^2)	no mass loss
Classification requirements for general structural integrity		
- Damages by the treatment	(5.000 turns)	none
	(25.000 turns)	none

Classification

Classification for change in appearance:	class 33
Classification for wear:	class 33
Classification for general structural integrity	class 33
Level of use classification	**class 33**
Luxury rating classification	**class LC1**

Explanations:

Textile floor coverings without pile are classified to their suitability in different use classes. There are three essential characteristics for the classification: change in appearance, wear behaviour and general structural integrity. These characteristics serve the description of the use behaviour in dependence to the intensity of use. **The use class assigned to the carpet is the lower one that was reached after the testing of the wear behaviour and change in appearance.** The different use classes are described as followed:

Domestic		Commercial [a]	
Class	**Use intensity**	**Class**	**Use intensity**
21	moderate / light	-	-
22	general / medium	-	-
22+	general	**31**	moderate
23	heavy	**32**	general
-	-	**33**	heavy

[a] Class 33 should be used as the basis to which additional requirements are added to provide an individual full specification

According prEN 15144:2006 pt. 6 textile floor coverings without pile shall be classified for luxury rating in Luxury rating class LC1.

3.17 Determination of castor chair suitability of textile floor coverings

Test conditions

According to EN 985, Method A
Test apparatus: castor chair test equipment from Feingerätebau Baumberg
Castors according EN 985
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

Number of revolutions	Index of appearance change	Index of colour change
after 5 000 revolutions	4,0	4
after 25 000 revolutions	4,0	3-4

Note: Index 1 - high change
Index 5 - no change

Main reasons influencing the assessment:
after 5 000 revolutions: colour
after 25 000 revolutions: colour

Castor chair index(r): 4,0

According to the specifications of EN 1307 the specimen can be classified as:
suitable for continous use

Damages by the treatment: none

3.18 Assessment of static electrical propensity - walking test

Test Conditions

According to EN 1815
Testing atmosphere: 23°C ± 1°C / 25% ± 3% rel. humidity
Base plate: Isolating rubber mat on metal plate
Sole-material: XS-664P Neolite
Pretreatment: none
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

Supplied condition			
Measurement 1	Measurement 2	Measurement 3	**Mean value**
+ 1,8 kV	+ 2,0 kV	+ 1,3 kV	**+ 1,7 kV**

Judgement

The tested sample in supplied condition can be classified as antistatic according EN 14041:2004.

3.19 Determination of electrical resistances

Test conditions

According to ISO 10965
Test atmosphere: 23°C ± 1°C / 25% ± 3% rel. humidity
Circuit voltage: 500 V
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

Sample	Measurement	Vertical resistance	Horizontal resistance
1	1	$7{,}0.10^{11}\ \Omega$	$5{,}8.10^{11}\ \Omega$
	2	$1{,}1.10^{12}\ \Omega$	$7{,}7.10^{11}\ \Omega$
2	1	$1{,}4.10^{12}\ \Omega$	$5{,}0.10^{11}\ \Omega$
	2	$7{,}5.10^{11}\ \Omega$	$3{,}8.10^{11}\ \Omega$
3	1	$1{,}0.10^{12}\ \Omega$	$4{,}4.10^{11}\ \Omega$
	2	$7{,}3.10^{11}\ \Omega$	$8{,}2.10^{11}\ \Omega$
Geometric mean value		**$9{,}2.10^{11}\ \Omega$**	**$5{,}6.10^{11}\ \Omega$**

3.20 Classification of the suitability for use on stairs

Test conditions

According to EN 1963
Test methode: Test B: nosing test
Note: The test was performed under report number 39509, dated 11th September 2001.

Test results

Tested sample: 2

Overall median of the appearance change in the edge area: **Note 3**

Judgement note: Note 1 - extreme appearance change
Note 2 - moderate appearance change
Note 3 - low appearance change

Classification

According to EN 1963 the specimen can be classified as **suitable for use area 4 ("extreme") *)**

*) corresponding to class 33

Note: A workmanlike construction of the stair nose with a rounding radius of at least 10 mm is presupposed to the judgement.

3.21 Comment on assessment of colour fastness

The assessment of change of colour is based on the extent of the visible contrast between treated and untreated specimen. This difference in coloration will be visually compared with the contrasts defined by the five pairs of neutral grey colour on the grey scale "Change in colour" according to ISO 105-A02. Each step of the grey scale corresponds to a fastness-rating, starting with numerical rating 5 (no contrast) up to numerical rating 1 (maximum contrast).

Index for change in colour: Bl = bluer W = weaker G = greener Str = stronger
R = redder D = duller Y = yellower Br = brighter

Staining of the adjacent fabric will be evaluated with the grey scale for assessing staining according to ISO 105-A03.

The steps of the grey scale are within the ratings "5" - no contrast (non-staining of the adjacent fabric) and "1" - maximum contrast (strong staining of the adjacent fabric).

A separate numerical rating is given for staining of each kind of adjacent fabric.

3.22 Summary of Results

		"EPOCA PRO"	
Details	- material of use surface(by the applicant)	100% polyamide	
	- Total mass per unit area	2144 g/m²	
	- Total thickness	4,2 mm	
Colour fastness to artificial light		6	
Colour fastness to rubbing	- dry rubbing	numerical rating 5	
	- wet rubbing	numerical rating 5	
Colour fastness to water	- colour change	numerical rating 5	
	- Staining of adjacent fabric (PA 6.6)	numerical rating 3	
Fibre bind, EN 1963, methode D			
- Change in appearance after 100 cycles		grade 5	
- Change in appearance after 200 cycles		grade 4 ½	
Sensitivity to spilled water	- change in colour	grade 4	
Soiling test – assessment of impregnation		grade 4	
Dimensional stability		length direction	cross direction
- max. dimensional change		- 0,4 %	- 0,1 %
Change in appearance – drum test		Median	Mean value
- Grade after colour correcture – 5000 cycles		grade 5,0	grade 4,8
- Grade after colour correcture – 22000 cycles		grade 4,5	grade 4,6
Mass loss, EN 1963, method A	- Mass loss per unit area	no mass loss	
	- Mass loss - relative		
General resistance, EN 985, method C		no damages	
Classification according prEN 15114 05/2006)			
- Basic requirements		fulfilled	
- Level of use classification		class 33	
- Comfort class		class LC1	
Castor chair suitability		A – suitable for permanent use (r= 4,0)	
Electrical resistance	- vertical resistance	$9{,}2 \times 10^{11}\ \Omega$	
	- horizontal resistance	$5{,}6 \times 10^{11}\ \Omega$	
	- Walking test	+ 1,7 kV	
	- Classification	antistatic	
Stair suitability		suitable for wear class 4 *)	

*) corresponds to class 33

4 Remarks

Sample Material

Results of performed tests only refer to the sample material provided.

Without explicit written other agreement testing is destructive and the sample material is transferred to the property of ÖTI, which is entitled to freely decide on storage and disposal.

Quality management and accreditations

All tests and services are performed under a quality management system according to EN ISO 17025.

ÖTI is accredited by several organisations for various tests offered. It also is a Notified Body with the registration number 0534. The accreditation by the Federal Ministry as testing laboratory was repeated under reference 92714/0574-I/12/2005 (Individual accredited test procedures are marked with the federal laboratory logo), the accreditation for testing and surveillance of building products was given by the OIB (Österreichisches Institut für Bautechnik). Details and other accreditations are given on request and can be found on www.oeti.at.

Issuance

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End of Report