



Report 52501 Test Report

Applicant

Franz Tüchler Ges.m.b.H.
Rennbahnweg 78
1220 Wien
ÖSTERREICH

Reference

Ing. G. Lach

Application

Determination of maximum force and wrinkle recovery.

Test Material

"Bühnensamte"

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: 5

Original Issue / Vienna 2006-07-20 / AD / KK20000484
Translation 2006-08-23

Authorised for test laboratory,
Ing. Judith Pointner

Authorised for technical group, authorised to sign,
Ing. Peter Trappl

Director,
Dipl.-Ing. Dr. Erich Zippel

ACHTUNG:

For your own security, please mind, that this certificate will be valid only if you have the according confirmation with reference to the sale contract issued by TÜCHLER Bühnen- & Textiltechnik GmbH. This Confirmation will include:

- Invoice's number
- Certificate's number
- Volume and type of making of the goods
- colour of the goods

The assignment of goods to the Certificate must be assured free of doubt - otherwise an high safety hazard will exist which bears the user of the goods.

Every misuse of this certificate will be legally punished.

Ing. Mag. Christoph Lach
Geschäftsführender Gesellschafter
TÜCHLER Bühnen- & Textiltechnik GmbH
Rennbahnweg 78 . A-1220 Wien





Contents

1	Order	2
1.1	Chronology	2
1.2	Samples.....	2
2	Findings / Tests performed.....	2
2.1	Description of the specimen	2
2.2	Determination of maximum force and elongation at maximum force -Strip method.....	3
2.3	Determination of wrinkle recovery of fabrics (appearance method).....	4
3	Remarks	5

1 Order

1.1 Chronology

Date	Received	Order
2006-06-19	2006-06-20	Determination of maximum force and wrinkle recovery.

1.2 Samples

No.	Received	Sample Identification	Sample Material
1	2006-06-20 (1)	"Bühnensamt BACH"	Textile fabric, approx. 1 running meter
2	2006-06-20 (1)	"Bühnensamt HAYDN"	Textile fabric, approx. 1 running meter
3	2006-06-20 (1)	"Bühnensamt MIDNIGHT"	Textile fabric, approx. 1 running meter
4	2006-06-20 (1)	"Bühnensamt LEHAR"	Textile fabric, approx. 1 running meter

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

2 Findings / Tests performed

2.1 Description of the specimen

Description of the specimen according to DIN 60 000

Tested sample: 1

Type of fibre according to DIN 60 001 part 1: 100 % cotton (declaration by the applicant)
Mass per unit area: 350 g/m² (declaration by the applicant)
Technological description: pile woven fabric

Tested sample: 2

Type of fibre according to DIN 60 001 part 1: 100 % cotton (declaration by the applicant)
Mass per unit area: 550 g/m² (declaration by the applicant)
Technological description: pile woven fabric

WARNING:

This certificate will be valid only if you have **Bünnen- & Textiltechnik GmbH.**
the according confirmation with reference **Every misuse of this certificate will be**
to the sale contract issued by **TÜCHLER** **legally punished.**


Ing. Mag. Christoph Lach
Geschäftsführender Gesellschafter
TÜCHLER Bühnen- & Textiltechnik GmbH
Rennbahnweg 78 · A-1220 Wien



Tested sample: 3

Type of fibre according to DIN 60 001 part 1: 100 % cotton (declaration by the applicant)
Mass per unit area: 570 g/m² (declaration by the applicant)
Technological description: pile woven fabric

Tested sample: 4

Type of fibre according to DIN 60 001 part 1: 100 % polyester (Trevira CS®)
(declaration by the applicant)
Mass per unit area: 520 g/m² (declaration by the applicant)
Technological description: pile woven fabric

2.2 Determination of maximum force and elongation at maximum force - Strip method

Test conditions

According to EN ISO 13934 Part 1

Condition of specimens: conditioned (dry)
Nominal gauge length: 200 mm
Rate of extension: 100 mm/min
Pre-Tension: sample 1: 5 N
sample 2, 3 u. 4: 10 N

Width of strips: 50 mm
Number of specimens: each 5

Test results

Tested sample: 1

	Maximum force		Elongation at maximum force	
Warp direction				
Mean value	250	N	7,3	%
Coefficient of variation	2,1	%	3,8	%
Confidence interval (P = 95%)	± 7	N	± 0,3	%
Weft direction				
Mean value	386	N	11,7	%
Coefficient of variation	2,2	%	2,3	%
Confidence interval (P = 95%)	± 11	N	± 0,3	%

Tested sample: 2

	Maximum force		Elongation at maximum force	
Warp direction				
Mean value	370	N	8,4	%
Coefficient of variation	2,4	%	2,7	%
Confidence interval (P = 95%)	± 11	N	± 0,3	%
Weft direction				
Mean value	490	N	10,4	%
Coefficient of variation	1,7	%	7,0	%
Confidence interval (P = 95%)	± 11	N		

WARNING:

This certificate will be valid only if you have the according confirmation with reference to the sale contract issued by TÜCHLER Bühnen- & Textiltechnik GmbH. Every misuse of this certificate will be legally punished.

Ing. Mag. Christoph Lach
Geschäftsführender Gesellschafter
TÜCHLER Bühnen- & Textiltechnik GmbH
Rennbahnweg 78 · A-1220 Wien



Tested sample: 3

	Maximum force		Elongation at maximum force	
Warp direction				
Mean value	770	N	9,4	%
Coefficient of variation	2,0	%	2,4	%
Confidence interval (P = 95%)	± 19	N	± 0,3	%
Weft direction				
Mean value	1030	N	10,5	%
Coefficient of variation	2,0	%	0,0	%
Confidence interval (P = 95%)	± 26	N	± 0,0	%

Tested sample: 4

	Maximum force		Elongation at maximum force	
Warp direction				
Mean value	1370	N	18,0	%
Coefficient of variation	1,1	%	1,2	%
Confidence interval (P = 95%)	± 19	N	± 0,3	%
Weft direction				
Mean value	1140	N	25,3	%
Coefficient of variation	4,2	%	2,3	%
Confidence interval (P = 95%)	± 60	N	± 0,7	%

2.3 Determination of wrinkle recovery of fabrics (appearance method)

Test Conditions

Standard: AATCC 128-1977

Test equipment: AATCC 128-1977 wrinkle tester

Load: 3,5 kg

Loading period: 20 minutes

Number of samples: each 3

Test Results

Tested sample: 1

	Wrinkle appearance after 24 hours of recovery
Fabric smoothness rating:	Rating 4

Tested sample: 2

	Wrinkle appearance after 24 hours of recovery
Fabric smoothness rating:	Rating 4

WARNING:

This certificate will be valid only if you have Bühnen- & Textiltechnik GmbH.
the according confirmation with reference Every misuse of this certificate will be
to the sale contract issued by TÜCHLER legally punished.

Ing. Mag. Christoph Lach
Geschäftsführender Gesellschafter
TÜCHLER Bühnen- & Textiltechnik GmbH
Rennbahnweg 78 · A-1220 Wien



Tested sample: 3

	Wrinkle appearance after 24 hours of recovery
Fabric smoothness rating:	Rating 4-5

Tested sample: 4

	Wrinkle appearance after 24 hours of recovery
Fabric smoothness rating:	Rating 5

Note: The assessment was made with a 5 grade assessment scale. Rating 1 means a very high grade of wrinkle and rating 5 means a low grade of wrinkle.

3 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 92714/0574-1/12/2005 (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

The valid first issue is done in paper and has single-handed signatures. For reference purposes and filling an unsigned electronic duplicate can be delivered in pdf format. Duplicates and translations will be marked accordingly on the cover sheet.

Copyright und Usage Notes


It is pointed out, that any alterations, amendments or falsifications of reports not authorized by the Issuer of the report will be prosecuted as civil and criminal offences; this especially to the appropriate requirements of ABGB, UrhG, UWG and criminal law and their respective international equivalents.

Reports are protected under international copyright laws. Written consent of the ÖTI is required for publications (also in excerpt) and reference to tests for public relation purposes. Reports may only be reproduced in full length.

End of Report

WARNING:

This certificate will be valid only if you have Bühnen- & Textiltechnik GmbH.
the according confirmation with reference Every misuse of this certificate will be
to the sale contract issued by TÜCHLER legally punished.


Ing. Mag. Christoph Lach
Geschäftsführender Gesellschafter
TÜCHLER Bühnen- & Textiltechnik GmbH
Rennbahnweg 78 · A-1220 Wien