

TIFI • Charlottenburger Allee 41 • 52068 Aachen • Germany

EgeTaepper A/S
Industrivej Nord 25
DK-7400 Herning

Textiles & Flooring Institute GmbH

Charlottenburger Allee 41 • 52068 Aachen • Germany

Phone: +49 241 9679-00

Fax: +49 241 9679-200

E-mail: postmaster@tfi-online.de

URL: www.tfi-online.de

Amtsgericht Aachen HRB8157 • VAT No.: DE209411312

Sparkasse Aachen • BIC: 390 500 00 • A/C: 1331222

IBAN: DE2239050000001331222 • SWIFT: AACSD33

Managing Director:

Dr. Ernst Schröder • Dr. Helmut Klingenberg

Test Report No. 370169-01

1 Procedure

OrderDetermination of the acoustical characteristics
Product nameHighline 1100 AB
Order byEgeTaepper A/S
Order of26.01.2007
Your referenceLenette Ormstrup
TFI reference number07-02-0019
Test official at TFIir. Dirk Collet, extension -153

2 Short sample description

Product typetextile floor covering
Type of manufacturetufted
Type of surfacecut pile
Colouring / patterningpatterned
Fibre composition of use surfacenot determined
Colourbeige dark brown grey
Type of backingneedled fleece backing (synthetic/natural)



3 Test results

According to EN 20354:1993 the tested specimen of the above mentioned quality has a calculated airbourn sound absorption coefficient $\alpha_{0,0}$ of 0,40 (H) (Annex SA).

According to ISO 140-8:1998 the tested specimen of the above mentioned quality has an acoustical insulation from impact noise of 35 dB (Annex TS).

4 Annexes

The individual results as well as type and extent of the tests can be found in the following annexes:

SA; TS

The tests marked with ^a are accredited according to EN ISO/IEC 17025.

Aachen, 07.03.2007




Dr. Ernst Schröder
- Managing Director -

The present test report is established to the best of our knowledge. Only the entire report shall be reproduced. Under no circumstances, extracts shall be used. Furthermore, we apply the "General Terms and Conditions for the Execution of Contracts" of the Textiles & Flooring Institute GmbH, also with regard to the order execution.

Annex TS - Impact sound transmission

1 Procedure

Product name.....Highline 1100 AB

TFI reference number.....07-02-0019

Test date09.02.2007

The product identification characteristics can be found on the first page of the test report, respectively in Annex KM.

2 Test method

Impact sound transmission according to EN ISO 140-8:1998.

The standard describes a method to measure the impact sound absorption of floor coverings under laboratory conditions, by means of a standardised hammer device.

3 Remarks

Additionally, the calculated value according to EN ISO 717-2:1997 is indicated.

The test was carried out by a subcontractor.

Annex SA - Airbourn sound absorption

1 Procedure

Product name.....Highline 1100 AB

TFI reference number.....07-02-0019

Test date09.02.2007

The product identification characteristics can be found on the first page of the test report, respectively in Annex KM.

2 Test method

Impact sound transmission according to EN 20354:1993.

The standard describes a method to measure the sound absorption level in a room.

3 Remarks

Additionally, the practical and the calculated sound absorption level according to EN ISO 11654-2:1997 are indicated.

The test was carried out by a subcontractor.



4. Test results

Enclosure SA

Sound absorption

DIN EN 20 354 : 1993 - 07 (ISO 354 : 1995)

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Measurement of sound absorption in a reverberation room

Tested material: **article: highline 1100AB**

Test room: reverberation room, Hauptstraße 133, 52 477 Alsdorf

Test area: 8,2 m²

Test method: method of reverberation room

Date of test: 09.02.2007

Description of the test material:

Total thickness: **10,5 mm**

Mass / area: **2,70 kg/m²**

laid loose on the floor of the reverberation room

Dimension of the test area:

length: 4,00 m

width: 2,04 m

Reverberation room:

Basic plan: trapezoid

Volume: 211 m³

Temperature: 20 °C

Humidity: 65 %

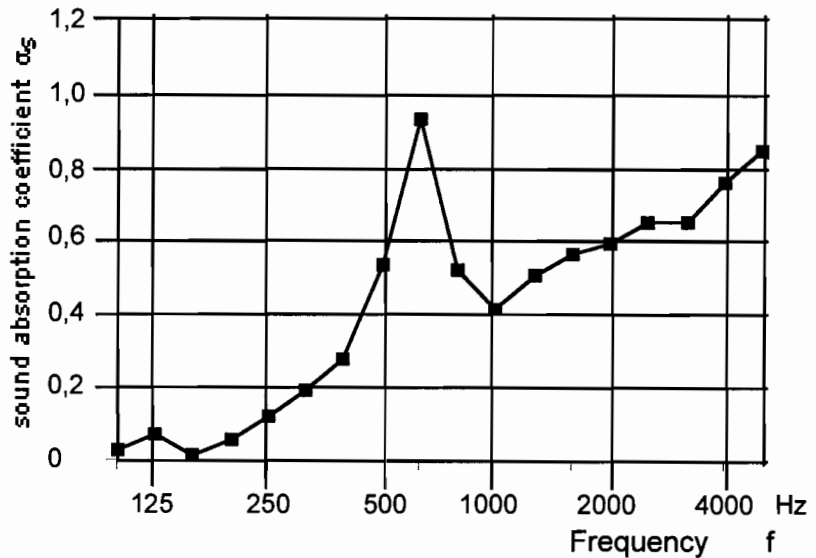
f / Hz	125	250	500	1000	2000	4000
α_s	0,07	0,12	0,54	0,42	0,60	0,76

Surface areas of reverberation room: 213 m²

Surface areas of reflectors in reverberation room: 54,5 m²

Reflectors:

- 6 Alu panels of 1,0 m/ 2,0 m
- 7 Plywood panels of 1,5 m/ 1,3 m
- 1 Alu panels of 1,8 m/ 0,9 m



Test sound: third-octave noise

Reception filter: third-octave

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05.03.2007

SWA Schall- und Wärmemeßstelle Aachen GmbH

(Dr.-Ing. L. Siebel)

4.1 Valuation of test results

Enclosure SA


Soundabsorber for the application in buildings - valuation of sound absorption Sound absorption of DIN EN ISO 11654 : 1997- 07

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Tested material: **article: highline 1100AB**
 Test room: reverberation room, Hauptstraße 133, 52 477 Alsdorf
 Test area: 8,2 m²
 Test method: method of reverberation room
 Date of test: 09.02.2007
 Description of the test material:
 Total thickness: **10,5 mm**
 Mass / area: **2,70 kg/m²**
 laid loose on the floor of the reverberation room

frequency - range
of the "shapeindi-
cators"

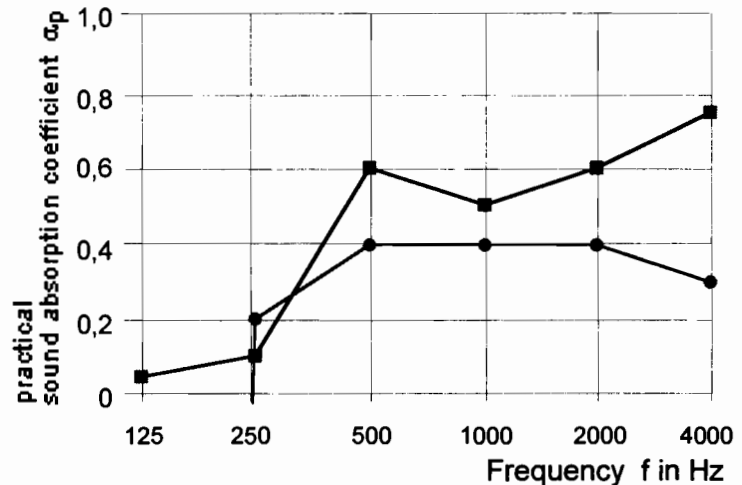
Frequency in Hz	practical sound absorption coefficient
125	0,05
L 250	0,10
M <u>500</u>	<u>0,60</u>
M 1000	0,50
H 2000	0,60
H 4000	0,75

Results: 
 Relation - curve: 

Reverberation room:
 Basic plan: trapezoid
 Volume: 211 m³
 Temperature: 20 °C
 Humidity: 65 %

Surfaces areas of
 reverberation
 room: 213 m²

Surfaces areas of
 reflectors in reverberation
 room: 54,5 m²



Evaluated sound absorptions grade α_w

$\alpha_w : 0,40 (- - H) ^*$

*) It is recommended insistently to use this singular valuation with complete curve of sound absorption garde.

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4.2 Test results

Enclosure SA

Reverberation times

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Measurement of sound absorption in a reverberation room

Tested material: **article: highline 1100AB**

Test room: reverberation room, Hauptstraße 133, 52 477 Alsdorf

Test area: 8,2 m²

Test method: method of reverberation room

Date of test: 09.02.2007

Description of the test material:Total thickness: **10,5 mm**Mass / area: **2,70 kg/m²**

laid loose on the floor of the reverberation room

Dimension of the test area:

length: 4,00 m

width: 2,04 m

Reverberation times:

f / Hz	To / s	T1 / s
100	6,97	6,66
125	7,43	6,64
160	6,83	6,64
200	7,71	6,97
250	7,05	5,90
315	6,41	4,98
400	6,37	4,50
500	6,98	3,73
630	7,11	2,80
800	6,64	3,66
1000	6,33	3,92
1250	6,31	3,62
1600	5,70	3,25
2000	5,04	2,96
2500	4,21	2,57
3150	3,29	2,19
4000	2,64	1,80
5000	2,02	1,44

Number of loudspeaker positions: 2

Test sound: third-octave noise

Number of microphone positions: 2 x 6

Reception filter: third-octave

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4. Test results

Enclosure TS

Impact sound insulation of ISO 140-8 : 1998 - 03

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Measurement of impact sound insulation by a floor covering - on a solid strings-floor

Tested material: **article: highline 1100AB**
 Test rooms: 02 u. K2, Hauptstraße 133, 52 477 Alsdorf
 Test area: 4,24 m x 4,15 m Test area of slab
 Date of test: 09.02.2007

Description of the test material:

Total thickness: **10,5 mm**

Mass / area: **2,70 kg/m²**

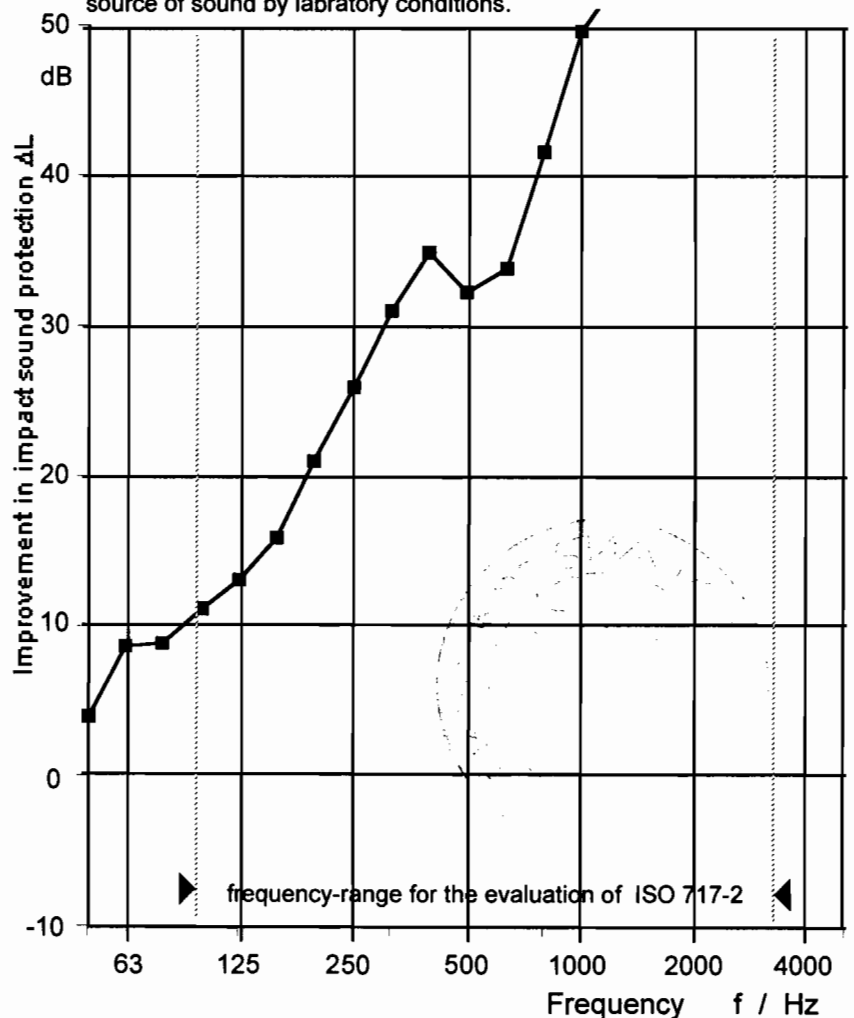
laid loose on a 140 mm thick reinforced concrete floor slab. Test material: 4 x 1m x 1m

Receiving room:

Volume: 58,9 m³
 Temperature: 20 °C
 Humidity: 65 %

The results are based on tests, which were effected with on artificial source of sound by laboratory conditions.

Frequency	Ln	ΔL
Hz	Bare floor dB	dB
50		4,0
63		8,7
80		8,9
100	61,0	11,2
125	61,4	13,1
160	64,8	16,0
200	63,7	21,0
250	65,4	26,0
315	65,6	31,0
400	66,1	35,0
500	66,0	32,2
630	66,4	33,8
800	66,3	41,6
1000	66,2	49,6
1250	66,6	53,3
1600	67,2	52,6
2000	67,1	53,0
2500	67,0	---
3150	66,4	---
4000		---
5000		---



Reception filter: third-octave
 Calculation according ISO 717-2:

Impact sound improvement index $\Delta L_w = 35 \text{ dB}$ (VM = 35 dB)	non rated reduction of impact sound insulation $\Delta L_{lin} = \Delta L_w + C_{l,\Delta}$ $\Delta L_{lin} = 22 \text{ dB}$	$C_{l,\Delta} = -13 \text{ dB}$ $C_{l,r} = 2 \text{ dB}$ $C_{l,r,50-2500} = 8 \text{ dB}$
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Test report no.:

370 169
 Aachen 05.03.2007

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(Sr.-Ing. L. Siebel)