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## Test Report No. 410573-04

### 1 Procedure

Order ..... Determination of the acoustical characteristics  
Sample designation ..... Re.Source  
Order by ..... Balsan S.A.  
Date of order ..... 09.05.2011  
Your reference ..... Murielle Richard  
TFI reference number ..... 11-05-0102  
Test official at TFI ..... Dipl.-Ing. Özlem Ersü, extension -138

### 2 Short sample description

Product type ..... textile floor covering  
Type of manufacture ..... tufted  
Type of surface ..... loop pile  
Colouring / patterning ..... with tonal effect  
Fibre composition of use surface ..... not determined  
Colour ..... grey, light grey  
Type of backing ..... heavy backing

### 3 Test results

According to EN ISO 354 : 2003 the tested specimen of the aforementioned product has a calculated sound absorption coefficient  $\alpha_{\omega_0}$  of 0,30 (---) (annex SA).

### 4 Annexes

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

Sound Absorption

SA 410573-04

The annexes marked <sup>a</sup> are based on tests accredited according to EN ISO/IEC 17025.

Aachen, 08.06.2011

Dr. Ernst Schröder

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

## Annex SA – Sound Absorption

### 1 Procedure

Sample designation.....Re.Source  
TFI reference number..... 11-05-0102  
Testing period .....31.05.2011

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

### 2 Test method

Sound absorption according to EN ISO 354:2003.

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

### 3 Remarks

Additionally, the practical and the calculated sound absorption levels according to EN ISO 11654-2:1997-07 are indicated.

The test was carried out by a subcontractor.

#### 4. Test results

Enclosure SA

### Sound absorption

ISO 354 : 2003

Page 2 of 4

Measurement of sound absorption in a reverberation room

Tested material: **article: Re.Source**  
 Test room: reverberation room, Hauptstraße 133, 52 477 Alsdorf  
 Test area: 10,0 m<sup>2</sup>  
 Test method: method of reverberation room  
 Date of test: 31.05.2011

#### Description of the test material:

Total thickness: **8,8 mm**  
 Mass / area: **4,20 kg/m<sup>2</sup>**

laid loose on the floor of the reverberation room

Dimension of the test area:

length: 3,33 m  
 width: 3,00 m

#### Reverberation room:

Basic plan: trapezoid

Volume: 211 m<sup>3</sup>

Temperature: 20 °C

Humidity: 65 %

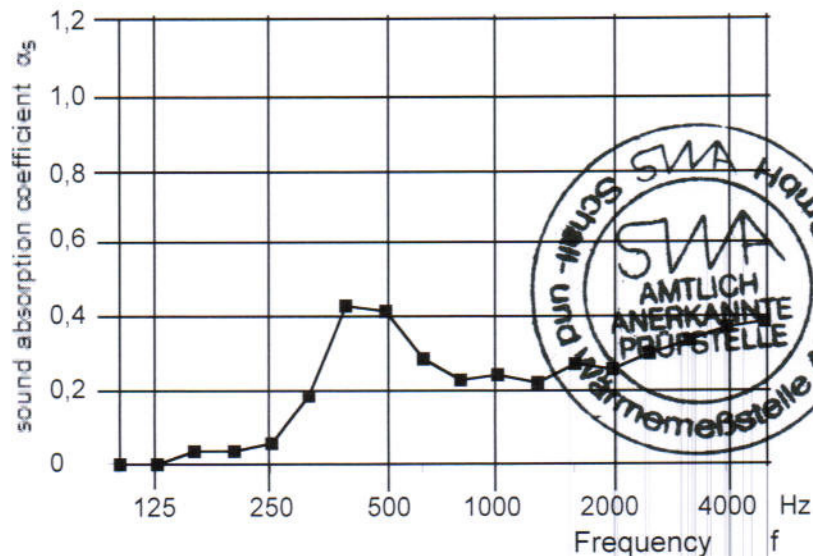
f / Hz	125	250	500	1000	2000	4000
$\alpha_s$	0,00	0,06	0,41	0,24	0,25	0,37

Surface areas of reverberation room: 213 m<sup>2</sup>

Surface areas of reflectors in reverberation room: 54,5 m<sup>2</sup>

#### 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

Test report no.:

**410 573**

Aachen

06.06.2011

SWA Schall- und Wärmemeßstelle Aachen GmbH

(Dipl.-Ing. A. Siebel)

**4.1 Valuation of test results**

Enclosure SA

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

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Tested material: **article: Re.Source**  
 Test room: reverberation room, Hauptstraße 133, 52 477 Alsdorf  
 Test area: 10,0 m<sup>2</sup>  
 Test method: method of reverberation room  
 Date of test: 31.05.2011

Description of the test material:  
 Total thickness: **8,8 mm**  
 Mass / area: **4,20 kg/m<sup>2</sup>**  
 laid loose on the floor of the reverberation room

frequency - range  
of the "shapeindi-  
cators"

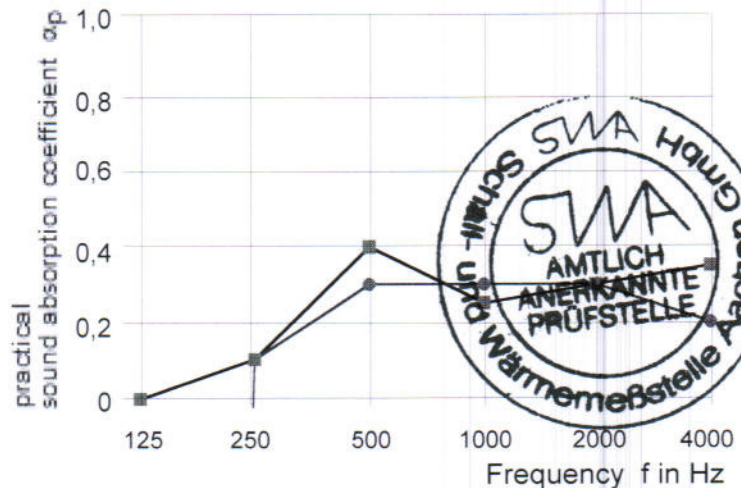
Frequency in Hz	pactical sound absorption coefficient
125	0,00
L 250	0,10
M 500	0,40
M 1000	0,25
H 2000	0,30
H 4000	0,35

Results:   
 Relation - curve: 

Reverberation room:  
 Basic plan: trapezoid  
 Volume: 211 m<sup>3</sup>  
 Temperature: 20 °C  
 Humidity: 65 %

Surfaces areas of  
 reverberation  
 room: 213 m<sup>2</sup>

Surfaces areas of  
 reflectors in reverberation  
 room: 54,5 m<sup>2</sup>



Evaluated sound absorptions grade  $\alpha_w$

$\alpha_w$  : **0,30 ( - - - ) \***

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

Test report no.:

**410 573**

A a c h e n

06.06.2011

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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: Re.Source**  
Test room: reverberation room, Hauptstraße 133, 52 477 Alsdorf  
Test area: 10,0 m<sup>2</sup>  
Test method: method of reverberation room  
Date of test: 31.05.2011

#### Description of the test material:

Total thickness: **8,8 mm**  
Mass / area: **4,20 kg/m<sup>2</sup>**

laid loose on the floor of the reverberation room

#### Dimension of the test area:

length: 3,33 m  
width: 3,00 m

#### Reverberation times:

f / Hz	To / s	T1 / s
100	8,10	8,06
125	7,29	7,25
160	6,65	6,25
200	6,84	6,42
250	6,89	6,17
315	6,20	4,64
400	6,35	3,53
500	6,51	3,64
630	6,65	4,29
800	6,36	4,46
1000	6,23	4,34
1250	5,96	4,32
1600	5,70	3,92
2000	5,15	3,73
2500	4,46	3,20
3150	3,70	2,71
4000	3,03	2,28
5000	2,40	1,89

Number of loudspeaker positions: 2  
Number of microphone positions: 2 x 6

Test sound: third-octave noise  
Reception filter: third-octave

Test report no.:

**410 573**  
Aachen 06.06.2011

SWA Schall- und Wärmemeßstelle Aachen GmbH