



VILNIAUS GEDIMINO TECHNIKOS UNIVERSITETO  
TERMOIZOLIACIJOS MOKSLO INSTITUTAS

(SCIENTIFIC INSTITUTE OF THERMAL INSULATION  
OF VILNIUS GEDIMINAS TECHNICAL UNIVERSITY )

Linkmenų 28, 08217 Vilnius, Lithuania  
Phone/fax +370 5 2751145, e-mail: akustika@vgtu.lt



LIETUVOS  
NACIONALINIS  
AKREDITACIJOS  
BIURAS

ISO/IEC 17025

Nr. LA. 01.028

TEST REPORT

No AL - A - 001/13

19 July 2013

Valid for the tested object only

Page 1 ( 3 )

1. CUSTOMER: JSC "Narbutas Furniture Company", Šeškinės str. 55A, LT-07159, Vilnius, Lithuania.
2. MANUFACTURER: JSC "Narbutas Furniture Company", Šeškinės str. 55A, LT-07159, Vilnius, Lithuania.
3. PRODUCT: Furniture sound absorbing screen, 38 mm thickness.
4. SAMPLES SELECTED: 11 July 2013. Full information about samples was presented in sampling letter dated 11 July 2013 issued by customer.
5. RECEIVING DATE: 11 July 2013. Furniture screen (09 screens of 1252x1000x38 mm size) were selected by the client and supply to arrange full specimen with 11,3 m<sup>2</sup> surface.
6. TESTING DATE: From 15 July 2013 to 16 July 2013.
7. TESTING LOCATION: 210 m<sup>3</sup> volume reverberation room, Linkmenų 28, Vilnius.
8. TESTS WERE CARRIED OUT IN ACCORDANCE WITH:  
LST EN ISO 354:2004 "Measurement of sound absorption in a reverberation room (ISO 354:2003)";  
LST EN ISO 11654:1998 "Acoustics - Sound absorbers for use in buildings - Rating of sound absorption (ISO 11654:1997)".
9. TESTS RESULTS:

Summary of Test Results for Furniture sound absorbing screen		
Characteristics	Applied Testing Method	Obtained values
Sound absorption coefficients measured in 1/3 octave band from 100 to 5000 Hz, $\alpha_s$	LST EN ISO 354:2004	In Annex 1 table
Practical sound absorption coefficient calculated in 1/1 octave band from 125 to 4000 Hz, $\alpha_p$	LST EN ISO 11654:1998	In Annex 2 table
Weighted sound absorption coefficient, $\alpha_w$	LST EN ISO 11654:1998	0,45
Class of the sound absorption	LST EN ISO 11654:1998	D

10. OTHER INFORMATION:

- 10.1. Expanded uncertainty with coverage factor 2 and the confidence level 95 % for a single number rating  $\alpha_w$  is  $\pm 0,05$ ;
- 10.2. Deviations from EN standards: there are no;
11. ANNEX: Complete test results according to LST EN ISO 354:2004 and rating calculated according to LST EN ISO 11645:1998 on 2 pages.

Head of Acoustics Laboratory



Dr. A.Jagniatinskis

Technically responsible for the tests

Dr. B. Fiks

# Sound absorption coefficient according to LST EN ISO 354:2006

## Sound absorption measured in the reverberation room

Manufacturer: UAB "Narbutas Furniture Company"

Client: UAB "Narbutas Furniture Company"

Date of test: 2013.07.16

Sample identification: Furniture screen

Specimen description: Furniture screen with laminated foam 38 mm thick

Specimen area: 11,3 m<sup>2</sup>

Specimen mounting: "A tipo"- tiesiogiai ant kameros grindu

Test room volume: 210 m<sup>3</sup>

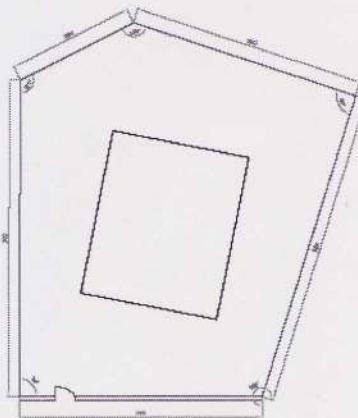
Area of room boundaries 215 m<sup>2</sup>

Temperature of test room: Empty 16,2 °C / with specimen 16,8 °C

Relative humidity (Empty / with specimen): 68 °C / 72 °C

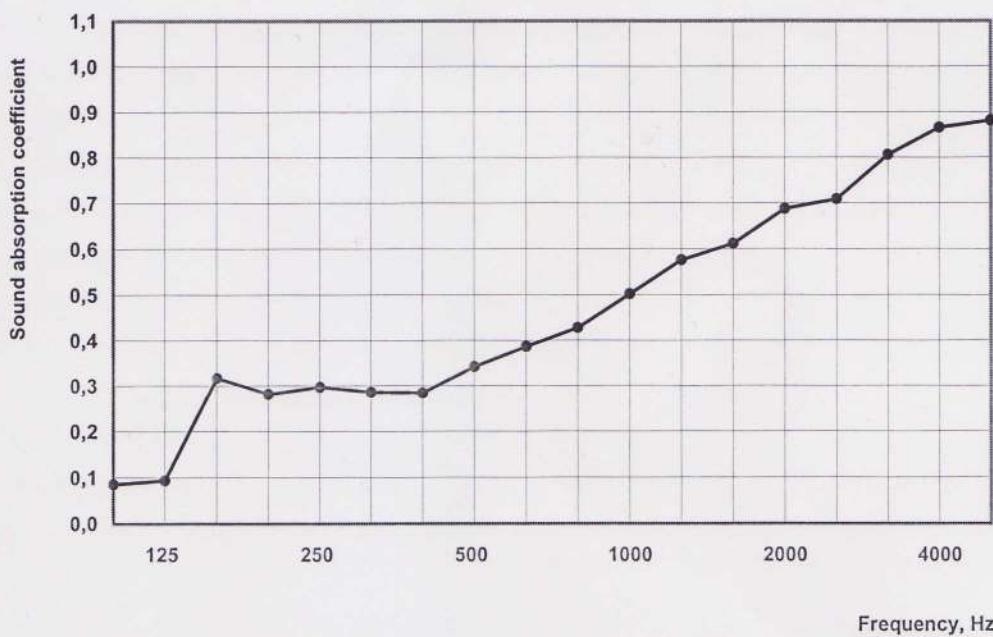
Sound signals: MLS in accordance to p. 7.3;

Decay evaluation range: 20 dB in accordance to p. 7.4.1;



### Measured sound absorbtion coefficient in 1/3 octave bands

Frequency Hz	$\alpha_s$ ,
100	0,09
125	0,09
160	0,32
200	0,28
250	0,30
315	0,29
400	0,28
500	0,34
630	0,39
800	0,43
1000	0,50
1250	0,58
1600	0,61
2000	0,69
2500	0,71
3150	0,81
4000	0,87
5000	0,88



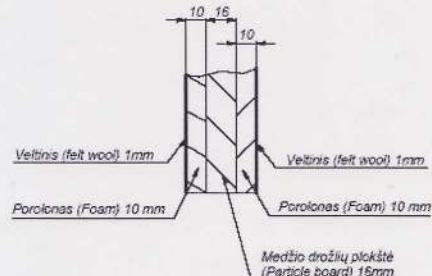
Report file:		
ANNEX of Test Report	Annex 1	
Date:	2013 07 16	
Person in charge to perform the test	<i>B. Fiks</i>	

Vilnius Gediminas Technical University  
Scientific Institute of Thermal Insulation  
Laboratory of Acoustics  
Linkmenų 28, LT-08217 Vilnius  
tel: + 370 (5) 2751145  
akustika@vgtu.lt

# Sound absorption rating by LST EN ISO 11654:1998

*Laboratory measurements of the sound absorption in the reverberation room*

Manufacturer:	UAB "Narbutas Furniture Company"	Measurements started:
Client	UAB "Narbutas Furniture Company"	2013-07-16
Sample erected by:	laboratory staff	
Sample identification:	Furniture screen	Specimen description: Furniture sound absorbing screen, 38 mm thickness specification presented on picture
Specimen area:	11,30 m <sup>2</sup>	
Test specimen mounted:	type "A" on the room floor	
Facility:	5-angle 210 m <sup>3</sup> volume reverberation room	
Test room surface area	215 m <sup>2</sup>	
Temperature in the test room:	Empty room 16,2 °C	with the sample 16,8 °C
Relative humidity in the test room	68 %	72 %
Measurement method:	applying MLS as specified in the 7.3;	
Reverberation time evaluation interval:	20 dB as specified in the 7.4.1;	



## *Rating of sound absorption, calculated in accordance with LST EN ISO 11654:1998*

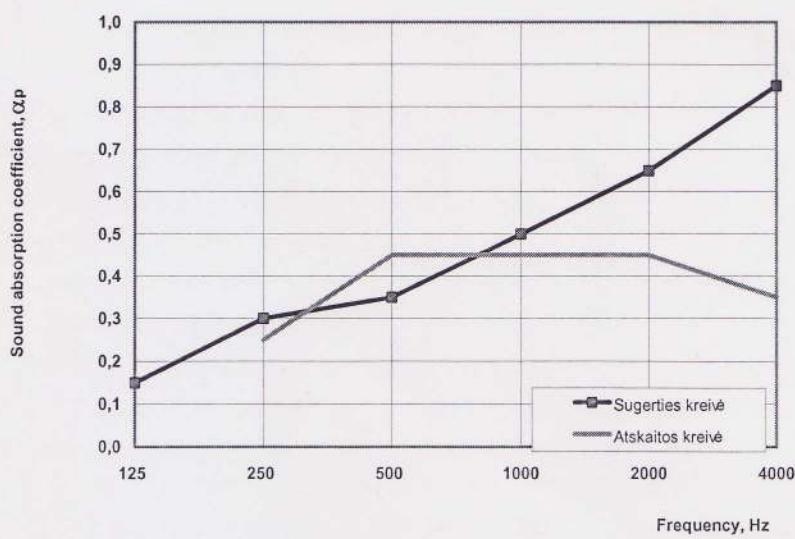
**weighted sound absorption coefficient:**  $\alpha_w = 0,45 (H)$

*It is strongly recommended to use this single-number rating in combination with the complete sound absorption coefficient curve that can be obtained on request*

## **Practical sound absorption coefficient in the 1/1 octave bands**

table 2

Frequency, Hz	$\alpha_p$
125	0,15
250	0,30
500	0,35
1000	0,50
2000	0,65
4000	0,85



Sound absorption class:	D
-------------------------	---

Test fail identification:	AL-A-001_13_EN.xls	Vilniaus Gedimino Technikos Universitetas
Report Nr.	AL-A-001/13 Annex 2	Scientific institute of Thermal Insulation
Data:	2013 07 16	Acoustics Laboratory
Operator	B.Fiks	Linkmenų 28, LT-08217 Vilnius, Lithuania ph: + 370 (5) 2751145 akustika@vgtu.lt