

Summary of Investigation

subject: Sound absorption clothes
date: March 11, 2015
reference: TS/MH/HT/A 2859-1E-NO

1 Introduction

At the request of Artex BV at Helmond (The Netherlands), tests have been carried out in the Laboratory for Acoustics of Peutz bv, at Mook, The Netherlands.

The aim of the tests is to determine the sound absorbing quality of clothes. The full test results are given in test report A 2859-1-RA-001 where a description is given of the standards and guidelines, the measurement situation, the measurement method, measurement accuracy and environmental conditions.

This document gives a summary of the test results expressed in the single number ratings and the absorption coefficients corresponding figure.

2 Measurement results.

The measurements have been carried out according to ISO 354:2003 - Acoustics Measurement of sound absorption in a reverberation room. The following results are gained:

VARIANT 1: Cloth 'Ode'	VARIANT 2: Cloth 'Ploegwool'
<ul style="list-style-type: none">- manufacturer: Artex- stretched tight on a frame- A-100 mounting- tested with perimeter frame- dimensions: 3800 mm x 2800 mm- thickness: ca. 0,6 mm- weight: 277 g/m²	<ul style="list-style-type: none">- manufacturer: Artex- stretched tight on a frame- A-100 mounting- tested with perimeter frame- dimensions: 4000 mm x 1500 mm- thickness: ca. 1,5 mm- weight: 600 g/m²
α_w (ISO 11654) = 0,45 NRC (ASTM - C423) = 0,40	α_w (ISO 11654) = 0,55 NRC (ASTM - C423) = 0,55

The frequency-dependent measurement results are presented on page 2 and 3 in the figure sheet.

Mook,

This note contains: 1 page and 2 figures

MEASUREMENT OF SOUND ABSORPTION IN A REVERBERATION ROOM ACCORDING TO ISO 354:2003



principal: Artex BV

Variant 1: Cloth 'Ode'

- manufacturer: Artex
- stretched tight on a frame
- A-100 mounting
- tested with perimeter frame
- dimensions: 3800 mm x 2800 mm
- thickness: ca. 0,6 mm
- weight: 277 g/m²



volume reverberation room: 214 m³

surface area sample: 10,21 m²

height of the construction: 0,1 m

measured at: Peutz Laboratory for Acoustics

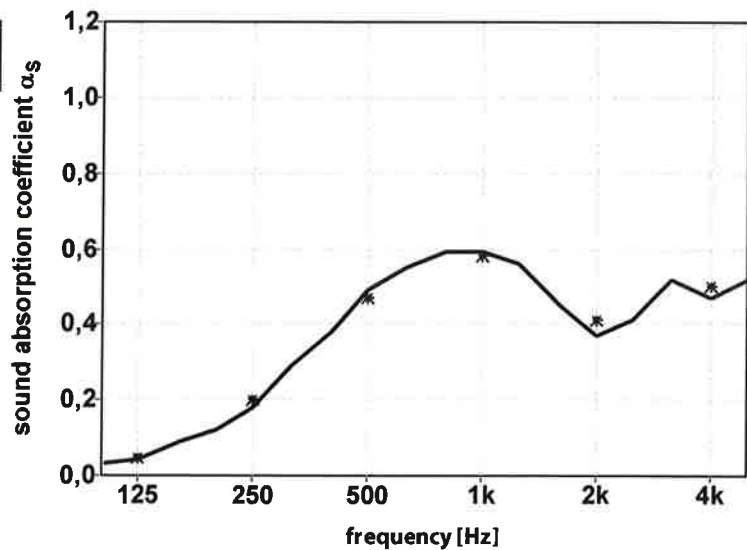
signal: broad-band noise

bandwidth: 1/3 octave

α_w (ISO 11654) = 0,45

NRC (ASTM - C423) = 0,40

— 1/3 oct.
* 1/1 oct.



	0,03	0,12	0,38	0,59	0,45	0,52
1/3 oct.	0,04	0,18	0,49	0,59	0,37	0,47
	0,09	0,29	0,55	0,56	0,41	0,52
1/1 oct.	0,05	0,20	0,47	0,58	0,41	0,50

publication is permitted for the entire page only

Mook, 13-01-2015

figure 1

MEASUREMENT OF SOUND ABSORPTION IN A REVERBERATION ROOM ACCORDING TO ISO 354:2003



principal: Artex BV

Variant 2: Cloth 'Ploegwool'

- manufacturer: Artex
- tight on a frame
- 100 mm distance to the room surface
- tested witperimeter frame
- dimensions: 4000 mm x 1500 mm
- thickness:: ca. 1,5 mm
- weight: 600 g/m²



Absorb, versie 5.8 mode 7, PM: MH, file: a 2859 E#:73-108 F#:37-72 A#:110 T₁ = 15,9 °C T₂ = 15,8 °C p₁ = 100,4 kPa p₂ = 100,4 kPa h₁ = 58,7 % h₂ = 57,9 %

volume reverberation room: 214 m³

surface area sample: 10,21 m²

height of the construction: 0,1 m

measured at: Peutz Laboratory for Acoustics

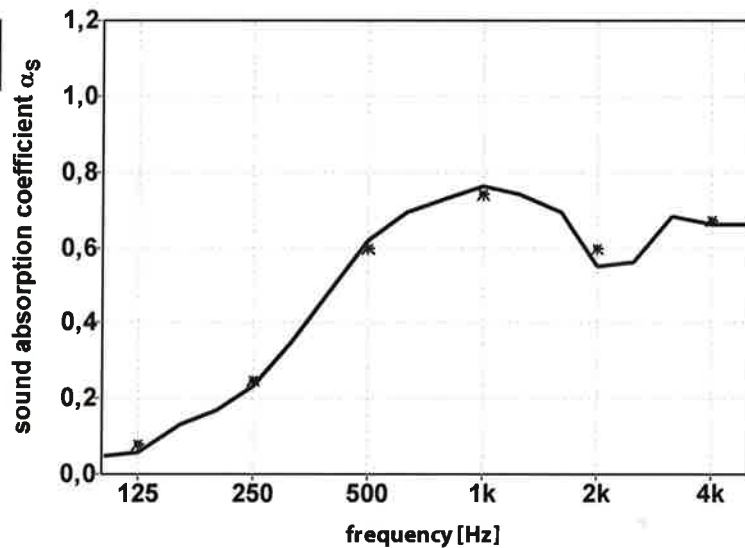
signal: broad-band noise

bandwidth: 1/3 octave

α_w (ISO 11654) = 0,55

NRC (ASTM - C423) = 0,55

— 1/3 oct.
* 1/1 oct.



	0,05	0,17	0,49	0,73	0,69	0,68
1/3 oct.	0,06	0,23	0,62	0,76	0,55	0,66
	0,13	0,35	0,69	0,74	0,56	0,66
1/1 oct.	0,08	0,25	0,60	0,74	0,60	0,67

publication is permitted for the entire page only

Mook, 13-01-2015