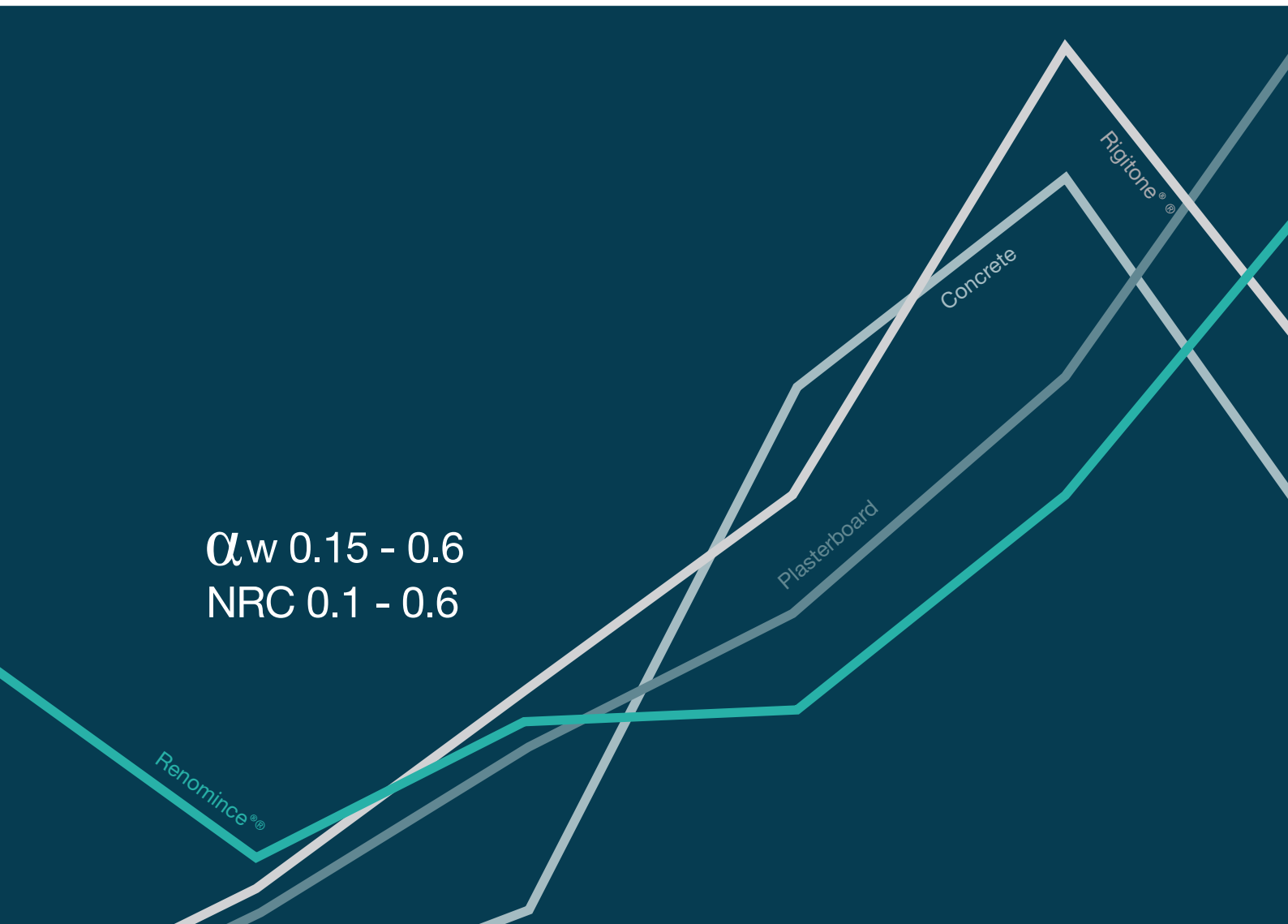


# texdecor

Acoustic and decorative solutions  
Wallcoverings & acoustic panels



$\alpha_w$  0.15 - 0.6  
NRC 0.1 - 0.6

## ACOUSTIC WALLCOVERING

- Acoustic values by type of wallcovering
- Acoustic trials by substrate
- Comparative studies
- Acoustic regulations
- Solution recommendations

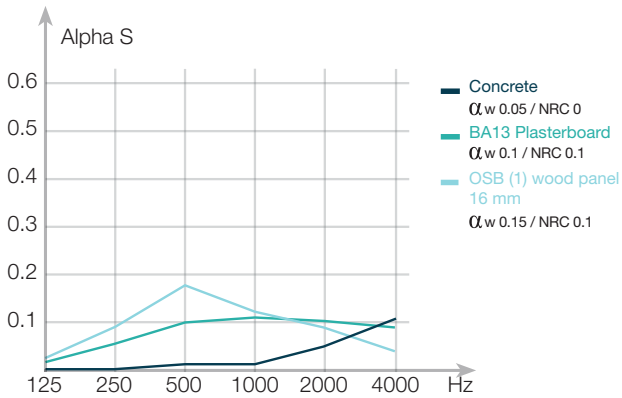
# Curves per type of wallcovering

## 1. By product family



$\alpha_w$  0.05 - 0.15 / NRC 0.1

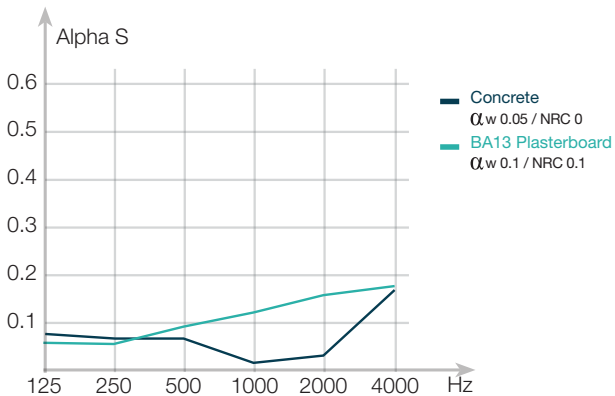
### a. Compact vinyls



- The compact vinyl is a dense, fine and non-porous material : it has no acoustic properties
- Only the quality of the substrate influences the result of the complex
- According to the Acoustic Measurements Guide, the lowest acoustic to be considered to calculate the equivalent absorption area of common circulation spaces =  $\alpha_w$  0.1
- (1) While the wood panel is acoustically favourable with the wall covering, this theoretical installation, it cannot be built : it does not correspond to a standard building substrate and no wallcovering will reach the fire-resistant classification required for public buildings

### b. Vinyl foams

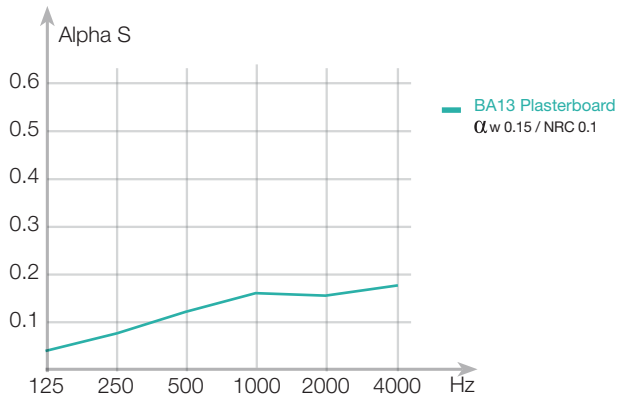
Quickmousse collection



- Although the vinyl foam is blocked on the surface, it is made of very fine air bubbles : it absorbs the waves, mainly those in the medium and high frequencies

### c. Non-woven layer

#### Soft collection



- The layer made of non-woven fibres is porous. Its thickness and the quality of the acrylic printing inks provide a modest absorption of medium to high frequencies



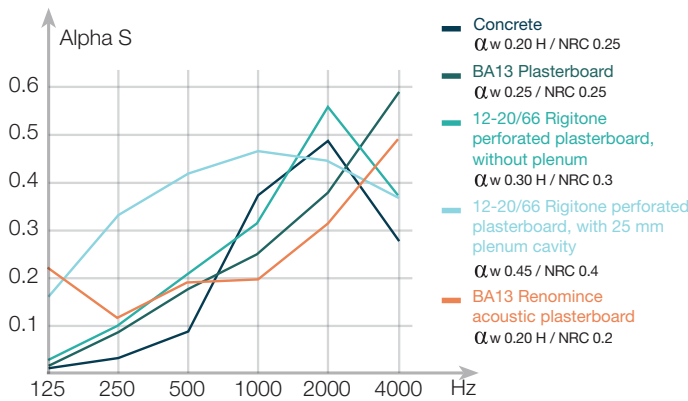
## 2. Vinyl acoustic wallcovering



$\alpha_w$  0.2 - 0.6 / NRC 0.2 - 0.6

### Micro-perforated vinyl coating on acoustic fleece

#### Vinacoustic collections

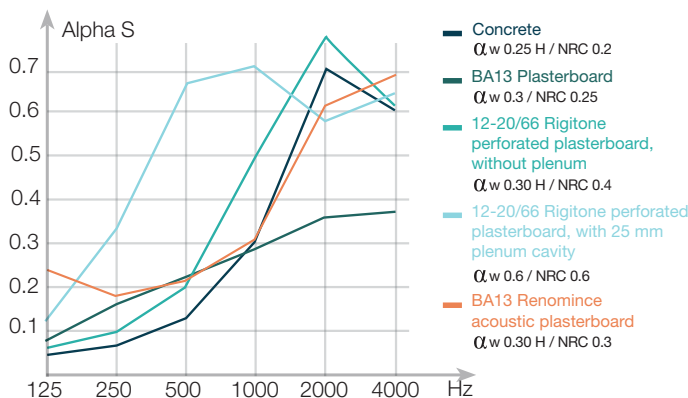


- Its composition acts favourably with the substrate perforated plasterboard :  $\alpha_w$  0.20
- The 3 layers of this coating make it the most soundproof vinyl on the market :
  - Surface : compact micro-perforated vinyl lets the wavelengths pass through (mainly medium and high frequencies)
  - Intermediary layer : perforated vinyl foam, acts as a shock absorber / spring
  - Under-layer : acoustic fleece absorbs sound energy
- The weight and density of the wall covering provides good performance levels in medium and high frequencies

## 3. Textile acoustic wallcovering

### a. Micro-perforated textile on PU acoustic foam

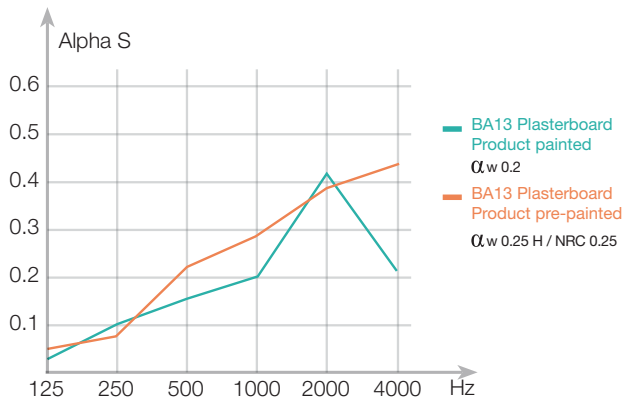
#### Eos collections



- Wallcoverings made of 2 absorbent materials :
  - Surface : micro-perforated suede textile, porous and absorbent
  - PU foam with open, very absorbent cells
- The porosity and low density of the 'sandwich' make it efficient on low frequencies
- The perforated plasterboard + plenum combination gives strong acoustical property :  $\alpha_w$  0.45 / NRC 0.6

## b. Fibreglass paint for acoustic fleece

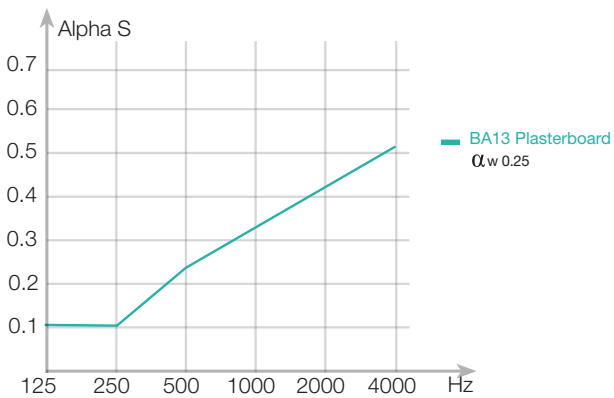
### Acoustiglass collection



- The wallcoverings comes pre-dyed,  $\alpha_w$  0.25 / NRC 0.25 after 2 coats of acrylic paint, the surface becomes more blocked and therefore less absorbent
- To assess and compare the existing products on this market, make sure that the acoustic test is carried out with a paint coating (2 coats), adapted to the use

## c. Jersey textile on PU acoustic foam

### Signature collections



# Curves by type of substrate

A detailed reading of the test reports will let you know what type of substrate has been used :  
It has to comply with acoustical requirement of the project

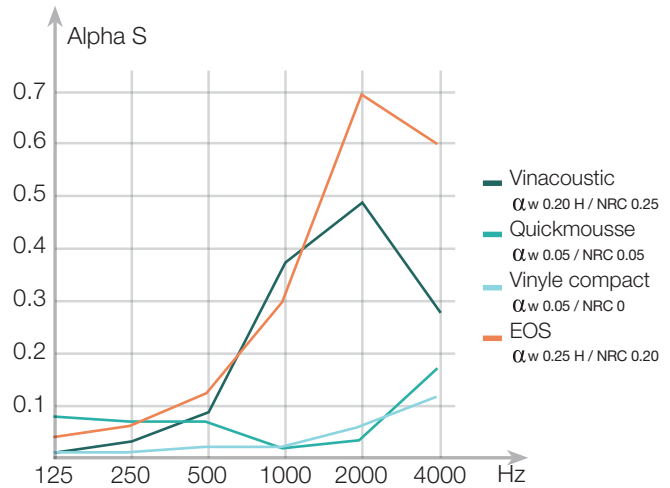
## Wood

Bad practices can make your project non-compliant :

Wooden substrates, OSB or MDF panels are not standard building substrates for wall surfaces. Furthermore, with these materials, no wall covering can meet the fire-resistant classification necessary for public buildings

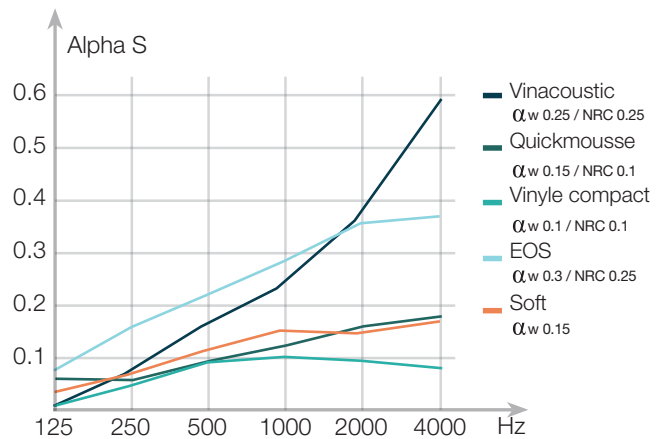
The assembly is acoustically favourable for some market players suggest that non-absorbent wallcoverings such as compact vinyl, can be used to artificially reach the result of  $\alpha_w$  0.15/ NRC 0.1

## Concrete



- To comply with the acoustic standards (NRA : New Acoustic Regulations) in communal areas with a concrete base : Vinacoustic  $\alpha_w$  0.20H or Eos  $\alpha_w$  0.25H<sup>(2)</sup>

## BA13

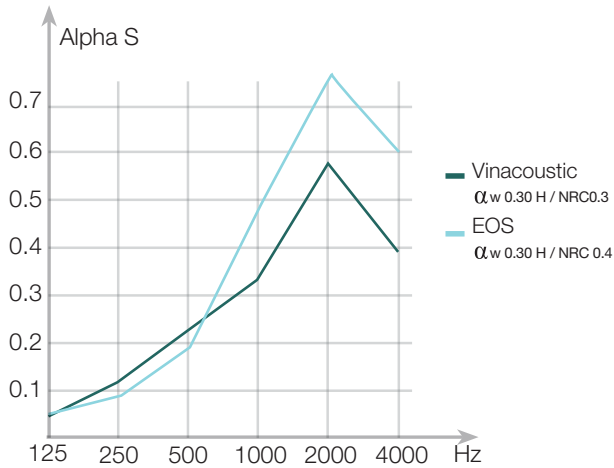


- To comply with the acoustic standards ("NRA" : New Acoustic Regulations) in communal areas with a BA13 plasterboard : Quickmousse  $\alpha_w$  0.15, Vinacoustic  $\alpha_w$  0.25, Soft  $\alpha_w$  0.15, Eos  $\alpha_w$  0.3<sup>(2)</sup>

(2) When there is no absorbent surface other than the wallcovering.

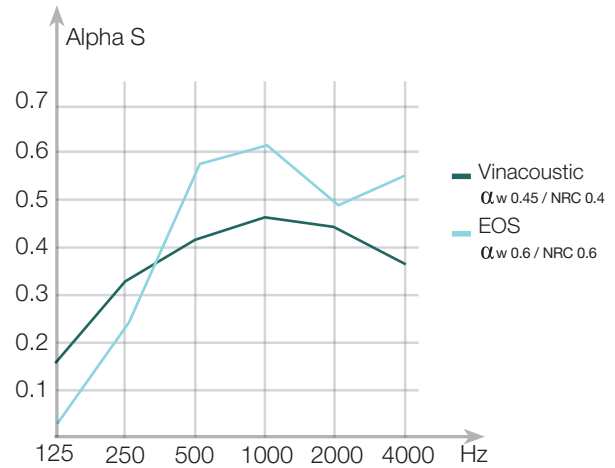
## Perforated plasterboard

Rigitone® 12-20/66 without plenum



## Perforated plasterboard

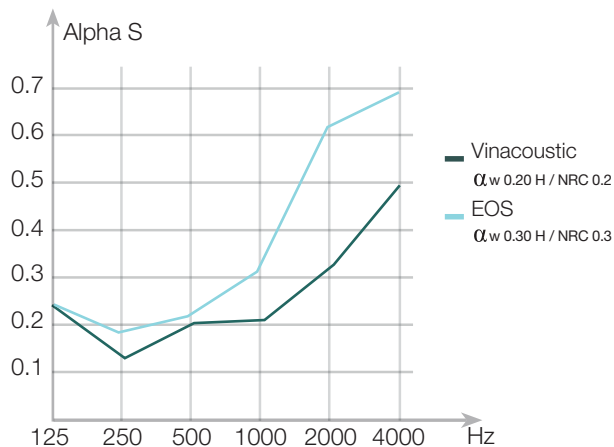
Rigitone® 12-20/66 with plenum cavity of 25 mm



- The assembly with a simple plenum (without mineral wool) provides a highly effective acoustic solution : high absorption from low frequencies, very balanced curve throughout the spectrum

## Acoustic plasterboard = acoustic insulation $\Delta RA +16$ dB

Renomince®



An assembly which combines acoustic insulation and sound absorption.

- This mix substrate provides additional absorption on very low frequencies
- Renomince® acoustic plasterboard is above all an acoustic insulation solution that is thin and easy to install :  $\Delta RA +16$  dB (on coated hollow bricks)
- According to the mass law, applying a heavy wallcovering on this based makes the acoustic insulation even more effective : Vinacoustic ( $890\text{g/m}^2$ ) =  $\Delta RA +4$  to  $+6$  dB (on plaster tiles)

# Regulations & acoustic standards

- Residential buildings – communal areas : NRA – Rulings dated 30th June 1999 / CERIVEA HQE (“HQE = Haute Qualité Environnementale”: High Quality Environmental standard) and French residential CERQUAL HQE norms
- Guide to acoustic measurements in residential buildings : August 2014 (Grenelle II Law / Acoustic certification from January 2013)
- Hotels – communal areas : NRA – Rulings dated 25th April 2003
- Educational and healthcare facilities – communal corridors : NRA – Rulings dated 25th April 2003
- Educational and healthcare facilities – other areas : Rulings dated 25th April 2003
- Offices and adjacent areas : NF S31-080 (January 2006) + NF S31-199 (“NF = Norme Française”: French National Standard)
- Workplaces (French Labour code) : Rulings dated 30th August 1990 regarding acoustic corrections in workplaces
- Public buildings and disabled persons’ access : Article 9 of the ruling dated 20th April 2017, absorbent treatment in restaurants, waiting and reception areas of public buildings
- Nurseries : CNB Guide (“CNB=Conseil National du Bruit”: national noise council) - June 2016 “Acoustic Quality in childcare facilities for children under 6 years of age (crèches, nurseries, preschools)”
- Sports’ facilities : French standard NF P90-207 (October 1992)

In buildings where there are no specific acoustic standards, acoustic consultants can apply the rules to suit the use of the premises.

If the standards specify a “minimum” acoustic comfort for users, it is common practice for the client or project manager to request a higher level of comfort.

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Standards only apply to new buildings.

It is only by voluntarily measures that renovated buildings can benefit from implementation of norms to provide the acoustic comfort that nevertheless essential.

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# Guarantee the acoustic comfort of your projects

## Applications

### An acoustic treatment for every use :

- Improving sound clarity : music room, concert hall
- Improving vocal intelligibility : classroom, conference room
- Fostering concentration : offices or open-space area
- Creating a confidential space : meeting room, reception room
- Encouraging communication : restaurant
- Controlling sound volume in order to reduce its spread : common circulation space, rest areas

### Texdecor offers 3 complementary surfaces of wallcoverings to meet the various requirements of public buildings :

- Vinyl finishing : for intensive use Very resistant to shock and easy to maintain
- Textile finishing : for a muffled, cosy and elevated atmosphere
- Finishing ready for painting : easy to coordinate when renovating, easy to maintain and renovate

### A complete range made of 2 large product families :

To be used separately or together to optimise the comfort of any area :

- Acoustic wallcoverings
- Acoustic panels

Each range is available in different qualities, styles and acoustic performances.

To guarantee you:

Products to suit your project

A quality for every use

A design to suit every style

A finish to suit every budget

A type of product to complement the architecture

# Acoustic values

Laboratories	Compact vinyl			Quickmousse		Soft	Vinaoustic						EOS						Acoustiglass				
	PEUTZ	SIM	PEUTZ	SIM	SIM	SIM	CSTB	SIM	PEUTZ	PEUTZ	PEUTZ	CSTB	SIM	PEUTZ	PEUTZ	PEUTZ	PEUTZ	SIM	SIM				
Substrate	Concrete	BA13	OSB	Concrete	BA13	BA13	Concrete	BA13	Rigitone (without plenum)	Rigitone (plenum 25mm)	Renomince	Concrete	BA13	Rigitone (without plenum)	Rigitone (plenum 25mm)	Renomince	Concrete	BA13	Rigitone (without plenum)	Rigitone (plenum 25mm)	Renomince	BA13 painted	BA13 pre-painted
125	0	0,02	0,04	0,08	0,06	0,04	0,01	0,02	0,02	0,17	0,21	0,05	0,07	0,03	0,12	0,23	0,02	0,02	0,03	0,12	0,23	0,02	0,04
250	0	0,05	0,09	0,06	0,04	0,07	0,03	0,09	0,1	0,34	0,11	0,07	0,15	0,09	0,34	0,14	0,1	0,06	0,09	0,34	0,14	0,1	0,06
500	0,01	0,1	0,17	0,06	0,09	0,12	0,08	0,17	0,21	0,41	0,17	0,13	0,22	0,2	0,7	0,21	0,13	0,21	0,2	0,7	0,21	0,13	0,21
1000	0,01	0,12	0,12	0,02	0,12	0,14	0,36	0,24	0,33	0,45	0,19	0,3	0,29	0,49	0,75	0,31	0,2	0,27	0,49	0,75	0,31	0,2	0,27
2000	0,04	0,1	0,08	0,04	0,14	0,13	0,46	0,38	0,55	0,43	0,33	0,72	0,35	0,87	0,57	0,61	0,41	0,36	0,87	0,57	0,61	0,41	0,36
4000	0,11	0,09	0,05	0,17	0,16	0,17	0,26	0,56	0,37	0,38	0,49	0,6	0,36	0,6	0,63	0,71	0,22	0,44	0,6	0,63	0,71	0,22	0,44
<b>Q<sub>w</sub></b>	0,05	0,1	0,15	0,05	0,15	0,15	0,20H	0,25	0,30H	0,45	0,20H	0,25H	0,3	0,30H	0,6	0,30H	0,2	0,25H	0,30H	0,6	0,30H	0,2	0,25H
NRC	0	0,1	0,1	0,05	0,1	-	0,25	0,25	0,3	0,4	0,2	0,2	0,25	0,4	0,6	0,3	-	0,25	0,4	0,6	0,3	-	0,25

Concrete  
 BA13 Plasterboard  
 OSB 16 mm wood board  
 12-20/66 Rigitone perforated plasterboard® (or equivalent), without plenum  
 12-20/66 Rigitone perforated plasterboard® with plenum cavity of 25 mm  
 BA13 Renomince® acoustic plasterboard (or equivalent)

The description of substrates can be found in the acoustic test reports.

Acoustic test reports of IAC Sim Engineering CSTB and PEUTZ laboratories :

PEUTZ - A3151-1E-RA / A3151-5E-RA / A3151-4E-RA / A3151-3E-RA  
 SIM-141G00 / SIM 138G04-7 / SIM 003G07-4 / SIM 138G04-1Bis / SIM 14GACC286 / SIM 202G05  
 CSTB – AC09-260 20 144

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