

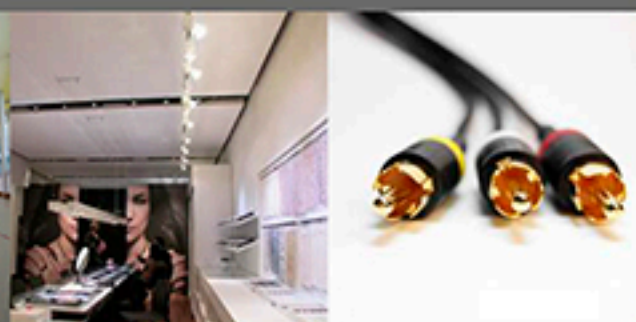
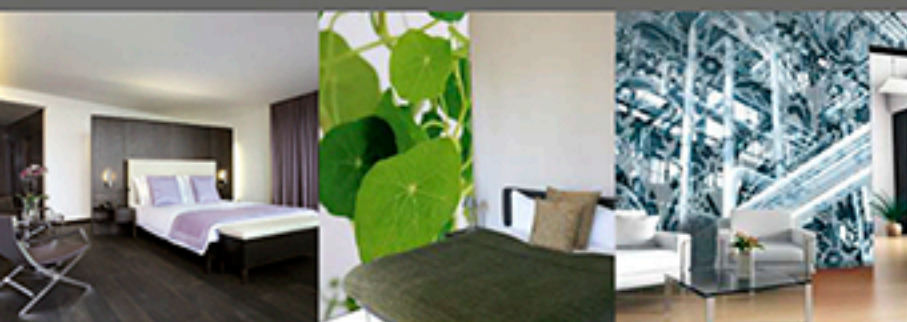
Acoustic adjustment



Technical characteristics



DESCOR®acoustic
Innovative systems
High-tech materials



The **DESCOR®** acoustic system for acoustic ambient-adjustment.

The **DESCOR®** acoustic system consists of a mineral cotton and the microperforated acoustic ceiling **DESCOR®** acoustic. The system can be installed on ceilings, on walls as well as on hung up speakers.

Decrease of the noise level :

The **DESCOR®** acoustic system allows a reduction of the noise level in the room where it is used :
(living spaces, offices, entrance halls, sport center, closed schoolyards, restaurants etc.).

Example 1

In an acoustically untreated entrance hall of 1000 m³ (20 m x 10 m x 5 m) the reverberation time* on medium frequencies is about 3 seconds. The installation of **DESCOR®** acoustic systems, consisting of a **DESCOR®** acoustic ceiling + unencased, 45 mm thick, halfstriped Isover-plates PB38, over the whole ceiling, allows a decrease of the reverberation time to about 0.7 seconds. Due to this decrease of the reverberation time, the noise level in this room will be reduced by approximately 8 dB(A).

Example 2

In an acoustically untreated school cafeteria of 125 m³ (10 m x 5 m x 2,50 m) the reverberation time on medium frequency is about 4 seconds. Covering about 90% of the walls with the **DESCOR®** acoustic system allows a decrease of the reverberation time to about 0.4 seconds, decreasing the noise level in this room by about 10 dB(A).

* The reverberation time is the time the sound needs in a closed room, to reduce its intensity by 60 dB(A) after the acoustic source is gone.

Improvement of the terms of hearing :

The **DESCOR®** acoustic system allows to promote and improve the terms of hearing in rooms (conference rooms, classrooms, restaurants etc.).

The intension of this acoustic treatment is to achieve a good understandability of the acoustic message, to avoid the „cocktail-party-effect“ as well as to ensure a good homogeneity of the sound field concerning level and frequency (the service of an acoustician is needed here).

Technical characteristics of the **DESCOR®** acoustic ceiling

■ Physical characteristics

•Width uncoated	app. 320 cm / 420 cm / 520 cm
•Width coated	app. 310 cm / 410 cm / 505 cm
•Composition	100 % Trevira CS onesided polyurethan-coating with foam
•Weight of the finished product	app. 185 g/m ²
•Thickness	0,44 mm
•Conditioning	double protection by polyethylene casing
•Breaking strength according to DIN EN ISO 13934-1	
lengthwise	392,5 N
cross direction	438,9 N
lengthwise	35,7
cross direction	63,7
•Tear propagation strength according DIN EN ISO 13937-2	
lengthwise	17,5 N
cross direction	16,6 N
•Density value D65 - light	
transfer coefficient	0,0693 T _{v,B}
reflection coefficient	0,8212 ρ _{v,B}
absorption coefficient	0,1095 α _{v,B}
•Global irradiance	
energy transmittance	0,0693 T _{a,B}
energy reflection factor	0,0693 ρ _{a,B}
radiance absorbance	0,0693 α _{a,B}
•UV	
UV-transfer rate	0,0128 T _{UV}

■ Fire protection

- Class M1 (PV SNPE Nr. 1 942-06)
- European class Bs1d0 (PV MFPA KB III/B-06-089)
- Class DIN 4102 B1 (PV-Versuch, MPA Dresden)

■ Thermic and hygro-thermic complementarity

- Example for an increase of thermal insulation :



- > High-duty acoustic and decoration
- > Acoustic adjustment
- > Improved sound insulation

Acoustic and decoration

DESCOR® acoustic : technology and innovative systems for acoustic adjustment, improved sound insulation and decoration.

Improved sound insulation

Results of laboratory tests



Technic :

DESCOR® acoustic is a wall and stretch ceiling made of Polyester with a special PU - coating.

Invisible micro-perforation in combination with mineral-cotton-boards by Isover intensify the acoustic effect.

DESCOR® acoustic is installed at room temperature, it is not necessary to heat the room.

The **DESCOR®** acoustic ceiling is installed onto a profile system, which runs around the area to be covered. The composition and quality of the stretch ceiling allows an ideal handling. Large surfaces with more than 5 m width can be installed by using a double fixing.

Acoustic :

■ Acoustic adjustment :

Intense decrease of the sound level in reverberative rooms. Combined with Isover-glass wool :

$\alpha_w = 1$ – sound absorbing class **A**

■ Acoustic adjustment and sound insulation :

Combined with a plaster board and Isover-glass wool (100 mm thick) for sound insulating walls, partition walls, etc. :

$\alpha_w = 1$ – sound absorbing class **A**,
 R_w higher or equal 35 dB.

■ Improved sound insulation :

The **DESCOR®** acoustic system contributes to a better sound insulation of the walls as well as a smaller transmittance of airborne and impact sounds. Additionally it affords a brilliant acoustic adjustment.

Decoration :

DESCOR® acoustic is available in the colours nature white and black.

DESCOR® acoustic can be UV-printed without losing its acoustical qualities during the printing process.

The **DESCOR®** motif collection is at your free disposal: we manage and develop a large collection of creations for you. Our graphic department takes care of the adaptation of the pictures to fit to the dimensions of your room.

The used printing technology allows a perfect brilliance and offers a large colour range.

Advantages :

- quality and durability
- impressive look
- no cracks or blisters
- quick installation without disarrangements
- timeless elegance
- effective cost-performance ratio
- no welding seams
- pleasant acoustic atmosphere
- thermal insulation
- eco-friendly

DESCOR® acoustic is the ideal solution for all wall and ceiling coverings.

Application areas :

- Renovation and new buildings
- Houses and flats
- Service sector like offices, conference rooms, public objects
- Commercial- or industrial rooms, shopping centers
- Public rooms, gyms
- Damp and/or chloric rooms

The installation of the **DESCOR®** acoustic systems is carried out by a network of approved technicians.

DESCOR® acoustic addresses to professional constructors only. On request we can provide you a list with recommended certified specialists.

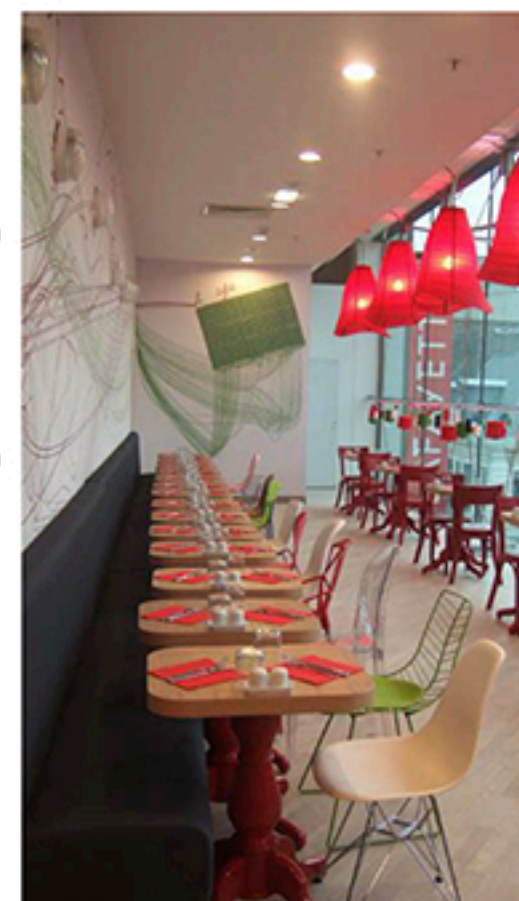


The **DESCOR®** acoustic system is used to improve the sound insulation as well as the silencing in rooms.

The **DESCOR®** acoustic system for an improved sound insulation is aligned to the individual requirements of the particular accommodation.

Example for 3 wall types :

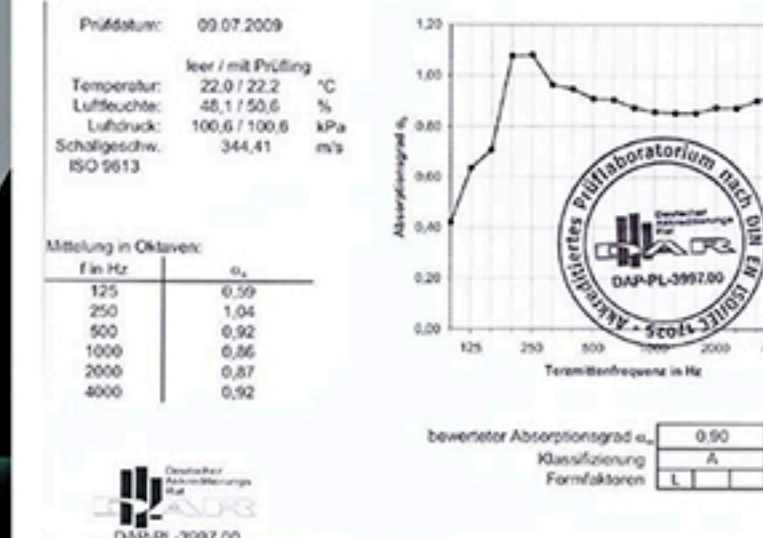
- Wall type A : distributive walls with a low performance :
sound insulation level (R_w) between 20 and 30 dB
Solution 1 : increase by 3 - 5 dB: 60 – 75 mm thick Isover-glass wool + **DESCOR®** acoustic ceiling
Solution 2: increase by 5 - 8 dB: plaster board mechanically mounted or completely bonded onto the emission wall, 60 – 75 mm thick glass wool + **DESCOR®** acoustic ceiling
- Wall type B : distributive walls with medium performance :
sound insulation level (R_w) between 30 and 40 dB
Solution 1 : increase by 4 - 7 dB: plaster board mechanically mounted or completely bonded onto the emission wall, 60 – 75 mm thick glass wool + **DESCOR®** acoustic ceiling
Solution 2 : high till very high increase up to 10 dB: coating type OPTIMA 2 + 45 mm thick Isover-glass wool + **DESCOR®** acoustic ceiling
- Wall type C : partition walls between apartments:
sound insulation level (R_w) between 40 and 55 dB
Solution : increase of the wall's insulation level by 15 - 25 dB: coating type OPTIMA 2 + 45 mm tick Isover-glass wool + **DESCOR®** acoustic ceiling
Example : high bricks of 20 cm + coating: 55 dB + coating type OPTIMA 2: sound insulation level (R_w) = 76 dB, which allows an improvement of 21 dB.



NB : The listed performances are based on the CEN-tests on fire behaviour (PV CSTB) and water permeability (PV Ceatp).
Wall type A : Use of the attenuation function of the mineral wool itself or combined with an external panelling (CEN-Versuche, PV Ceatp 2312.6.284 ISOVER)
Wall type B : Same as solution 1 of wall type A
Wall type B : Solution 2: utilisation of the Masse-Feder-Masse-System, test reports: CSTB AC08-26014413/1, AC08-26014413/2, AC08-26014415
Wall type C : Same as solution 2 of wall type B
All listed solutions allow an acoustic adjustment in the range of $\alpha_w = 1$

When, after installing the **DESCOR®** acoustic system, the sound level in the emission room has decreased by 5 dB, the sound level in the reception room will also be reduced by 5 dB.

Rating of the sound insulation in echo rooms
Sound insulation grade according to DIN ISO 354: 2003-12
Test material: **DESCOR®** acoustic black/white



Rating of the sound insulation in echo rooms
Sound insulation grade according to DIN ISO 354: 2003-12
Test material: **DESCOR®** acoustic printed

