



OPALFILM® Whisper
OPALWHISPER®

Acoustic films for acoustic absorption



An effective acoustic insulation is highly requested in large offices at working places, private rooms, in spacious halls, in conference rooms and in the gastronomy.

The reason: A good room acoustics is positive for the health, the wellbeing and the performance.

The special acoustic films by HAVERKAMP reduce the reflecting acoustic and the reverberation time what leads to a better room acoustic. This effect rests on its microperforation. In this patented process the films are drilled with holes of 0,2 mm diameter in hole distances of 2 mm. As soon as sound waves hit the film a physical reaction occurs: through the friction generated at the hole edges the sound energy is transformed into heat. Thus, the reverberation periods are markedly reduced and the sound level is lowered.

A significant reduction of the reverberation time as well as a reduction of the sound level will be achieved.

Areas of application:

- call centers
- canteens
- living rooms
- entrance halls
- large offices
- swimming halls
- production plants
- conference rooms

Acoustics solutions are available in two different variants:

■ **OPALWHISPER®:**

Acoustic films as sound absorption for ceilings and walls.

■ **OPALFILM® Whisper:**

Acoustic films are based on PET-basis also known as shade films for roller blinds. These films are available for various sun protection and glare protection blind systems as well as on rolls.

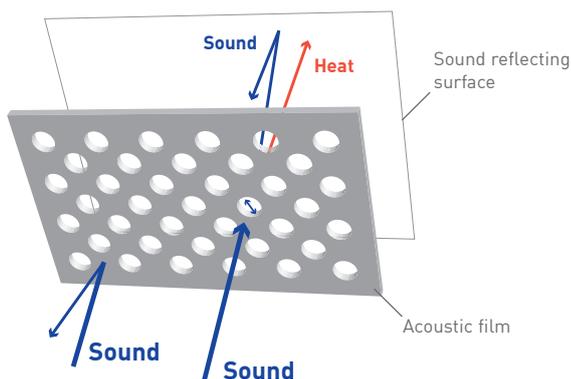


Figure 1: Sound absorption effect of the HAVERKAMP acoustic films

Acoustic films for acoustic absorption



Sound absorptions for ceilings and walls

With the OPALWHISPER® panel absorber, acoustic problems can be solved through ceiling walls and glass façades. Various clamping systems enable uncomplicated installation of the individual film elements. The films are flexible applicable.

Due to this the panel absorber can be used as a discreet or creative element for the sound insulation.

The high room acoustic efficiency of the OPALWHISPER® is set on a special microperforation. In this patented process the films are drilled with holes of 0,2 mm diameter in hole distances of 2 mm. As soon as sound waves hit the film a physical reaction occurs: through the friction generated at the hole edges the sound energy is transformed into heat. Thus, the reverberation periods are markedly reduced and the sound level is lowered.



Opportunities for the installation:

- fixing the corners through spacers plus eyelets
- complete frame fixture through spacers plus aluminum profiles

The advantages of the OPALWHISPER® panel absorber at a glance:

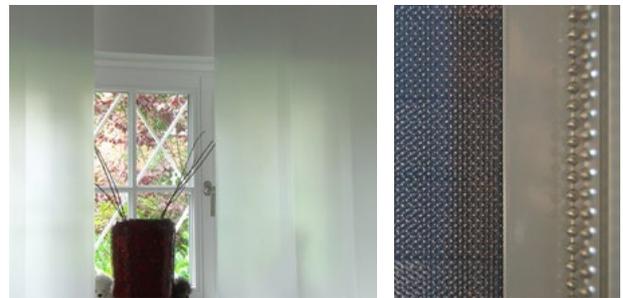
- sound absorption for an effective sound insulation
- suitable for ceiling or wall installation
- microperforation of holes with a diameter of 0.2 mm
- decreasing reverberation time and sound level
- available in transparent and translucent (white matte) or either in grey/grey 2R or silver/grey 2R, silver/grey 10R; further color variants upon request
- areas of application: call center, large offices, canteens, swimming halls, concert halls, entrance halls, conference rooms, living rooms etc.

OPALFILM® Whisper

Integrable sound absorption for variable sun- and glare protection systems

If sun- and glare protection values are additionally required beside the acoustic insulation, a combination of glare protection and sound absorption with OPALFILM® Whisper should be taken into consideration.

Due to the patented microporosity, every variable sun- and glare protection system incorporated with sound absorption values will become an all-rounder for the use at any object. As manufacturer of these films, HAVERKAMP is able to refine the different OPALFILM® film varieties with a complemented sound absorption – for roller blind systems, vertical blind systems and panel screens.



The advantages of OPALFILM® Whisper at a glance:

- sun protection and sound absorption in combination
- suitable for numerous sun- and glare protection systems, roller blind systems, vertical blind systems and panel screens
- improvement of the room acoustic through decreasing and reflecting sound and reverberation time
- integrated UV-protection about 99%
- for a glare-free working at working places according to workplace ordinance with review on the outside
- available in different embossing variants as well as in multiple colors
- areas of application: large offices, production plants, call centers, conference rooms, living rooms etc.

Film colors

Panel absorber



transparent



translucent



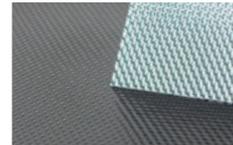
Pergamo

Film colors

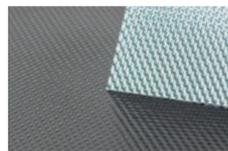
Acoustic films for variable systems (PET)



grey/grey 2R



silver/grey 2R



silver/grey 10R



Pergamo

Further types on request.

The shown film colors could vary from the printed original.