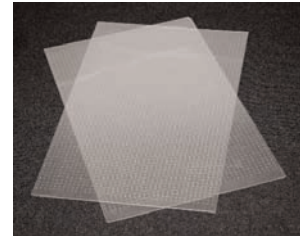
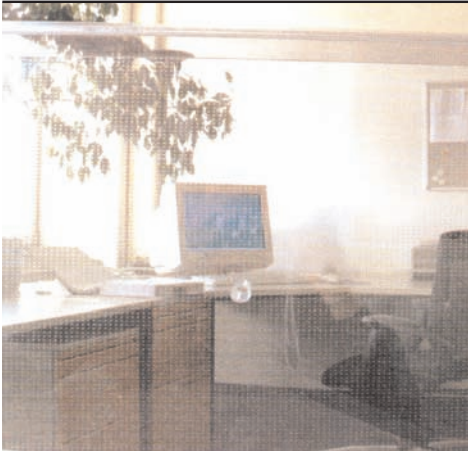


# Clearsorber™ Sheet

Absorption



*Transparent microperforated sheets*

*From The Acoustical Industry's Leading Innovator*

There are many applications where glass is used extensively, such as atria, lobbies, offices, museums, board rooms, etc. Excessive reverberation and interfering reflections are often the result. However, traditional sound absorptive materials applied over these surfaces would defeat the initial intent to provide outdoor views and natural lighting. Now a new acoustical technology is available to address these acoustical needs, while maintaining the transparent design intent. Clearsorber™ Sheet is based on new patented technology, utilizing microperforations in a transparent or translucent sheet. When the Clearsorber™ Sheet is spaced off vision glass, these microperforations produce significant viscous losses, providing the necessary sound absorption. Applications are only limited by the imagination. ***The Future Is Clear!***



***The Sound of Innovation™***

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# Problem and Solution

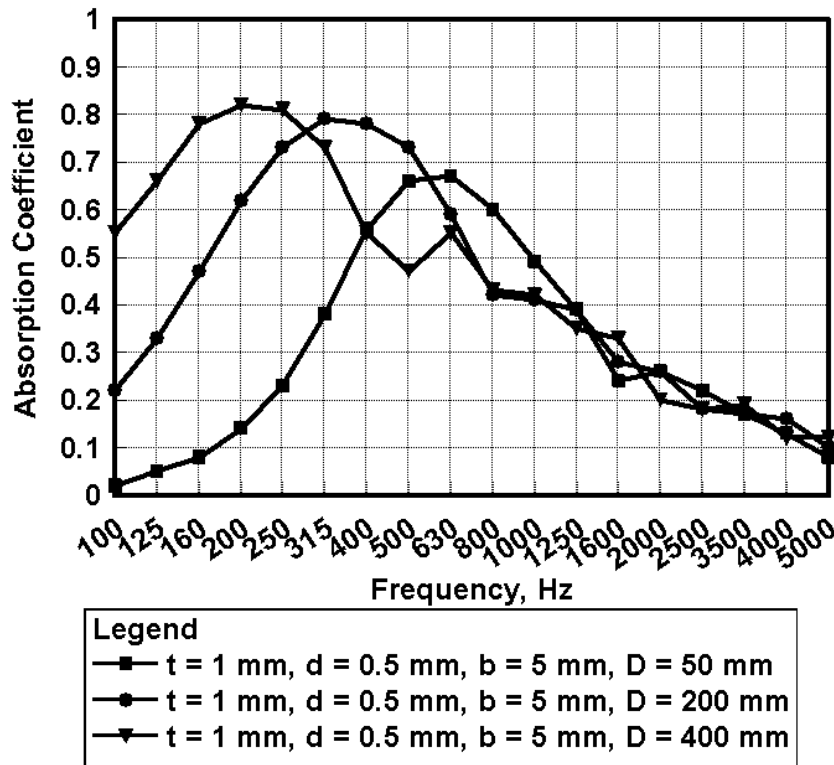
## Problem

Projects designed with extensive use of glass surfaces can produce strong interfering reflections and excessive reverberation, which create an uncomfortably loud ambiance, causing fatigue, and corrupting speech intelligibility.

## Solution

To address these acoustical problems, while maintaining natural lighting and visibility, RPG introduces Clearisorber™ Sheet, made from microperforated polycarbonate. If the perforations in a Helmholtz resonator are made sub-millimeter in diameter, they are comparable to the thickness of a boundary layer of air. As sound passes through these microperforations, sound absorption will occur due to viscous boundary layer effects in the perforations, as long as an air cavity is provided between the Clearisorber™ Sheet and the vision glass. It is then possible to achieve sound absorption without the need for additional porous material in the cavity behind the microperforated sheet, thus allowing the panel to be transparent or translucent. Therefore, the Clearisorber™ Sheet offers an acoustical solution when a clear sound absorber is required.

# Performance Specifications



## Absorption

The graph illustrates the sound absorption coefficient for a 1 mm thicknesses (t), 0.5 mm hole diameter (d), 5 mm hole spacing (b) and various distances (D), from the glass.

# Installation

Clearisorber™ Sheets can be mounted or suspended with exposed decorative hardware (examples shown to the right) or formed into a panel spaced off a non-perforated sheet with acrylic borders.

## FEATURES

- Microperforated
- High Sound Absorption
- Transparent
- Moisture, bacteria, and fungi resistant
- UV stable
- Class A Fire Rating
- Easy to install

## BENEFITS

- Patented sub-millimeter microperforation technology in a transparent sheet provides sound absorption
- High absorption is a result of viscous boundary layer effects in the perforations, as long as a rear air cavity is provided between the Clearisorber™ Sheet and the vision glass
- Because the microperforations provide sound absorption without the need for a backing porous material, the Clearisorber™ Sheet can be made transparent or translucent, allowing natural lighting and visibility from a clear absorber
- The 1 mm sheets are resistant to moisture, bacteria, and fungi and so can be used in place of traditional fabric upholstered systems
- UV stability insures the panels will not discolor nor decompose over time
- Polycarbonate can be used in those facilities requiring a Class A/1 rating
- Quick and easy installation saves time and money
- Panels can be simply mounted or hung with decorative hardware selected by the architect
- Sealed panels can be fabricated from one layer of Clearisorber™, air cavity and non-perforated sheet with acrylic borders

## APPLICATIONS

Atria, Botanical Gardens, Lobbies, Auditoriums, Commercial facilities, Swimming Pools, Clean Rooms, Food Processing Plants, Food Prep Areas, Cafeterias, and Restaurants

## SPECIFICATIONS

- Material: Polycarbonate
- Sizes: 2500 mm x 1250 mm sheets
- Thickness: 1 mm
- Weight: 0.26 lbs/sf
- Color: Clear



Hanging Mount



Standoff Mount