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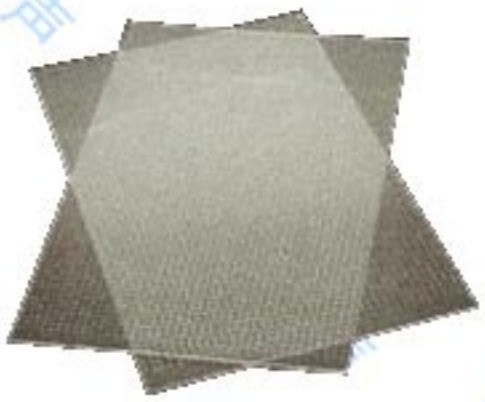
RPG

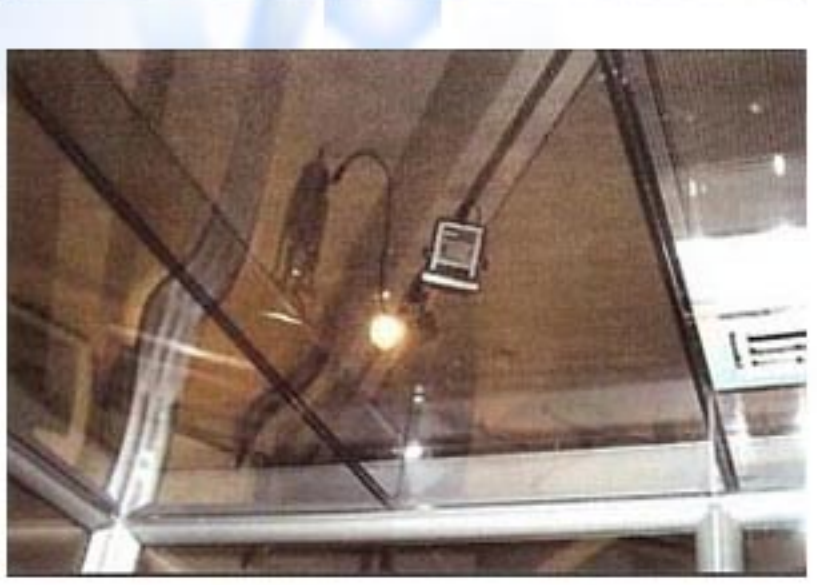
Absorption

Clearsorber™ Sheet

Transparent microperforated sheers
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 translucent sheet. When the Clearsorber™ Sheet is spaced off vision glass, these microperforations produce significant vision losses, providing the necessary sound absorption. Applications are only limited by the imagination. The Future Is Clear!



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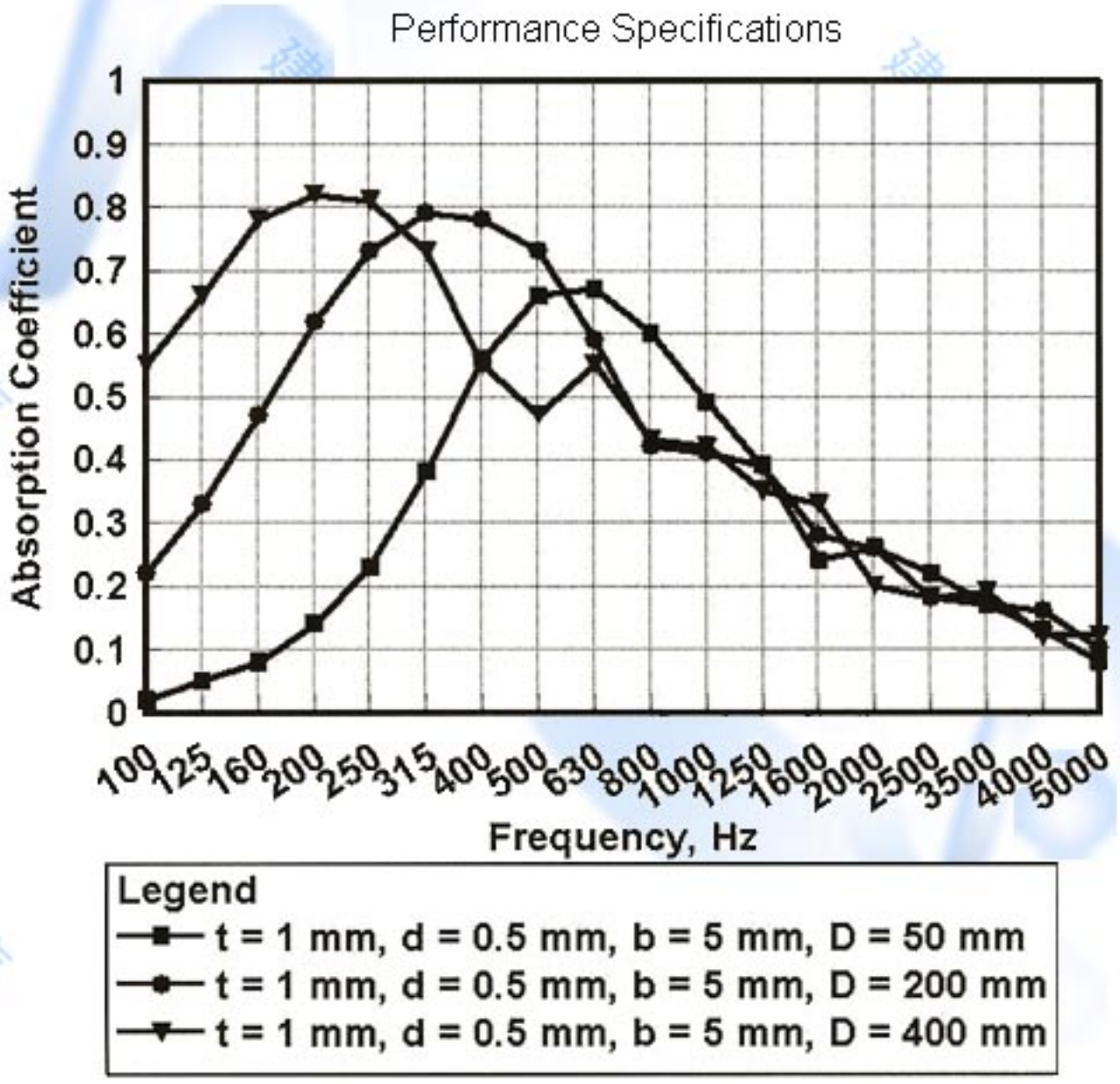
Problem and Solution

Problem

Projects designed with extensive use of glass surfaces can produce strong interfering reflection 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 Clearsorber™ sheet, made from microperforated polycarbonate. If the perforation in a Helmholtz resonator are made submillimeter 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 Clearsorber™ Sheet and the vision glass. It is then possible to achieve sound absorption without the need for additional porous material in cavity behind the microperforated sheet , thus allowing the panel to be transparent or translucent. Therefore, the Clearsorber™ Sheet offers an acoustical solution when a clear sound absorber is required.



Absorption

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

Installation

Clearsorber™ 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.