SoundPrufe®

Laminated Sound Control Safety Glass

DESCRIPTION

SoundPrufe® laminated safety glass is manufactured with a special vinyl interlayer that offers better sound control than traditional polyvinyl butyral (PVB) interlayers.

TYPICAL APPLICATIONS

Where additional sound control is needed e.g. boardrooms, airports and areas with high traffic noise.

BENEFITS & FEATURES

Sound reduction in clear safety glass.

VARIATIONS

Optimal sound solutions are available in various PG SmartGlass® product combinations.

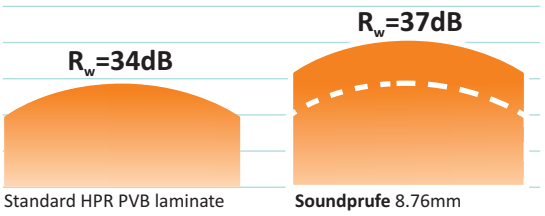
LEGISLATION AND STANDARDS

Complies with SANS 1263 Part 1 (safety glass).

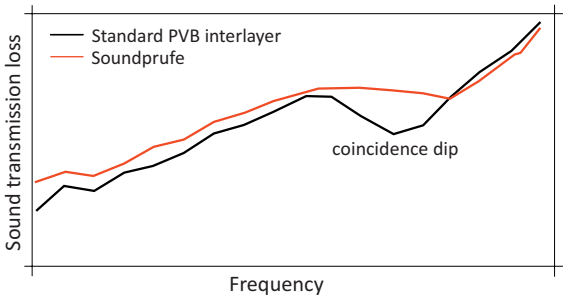
SIZES & THICKNESSES

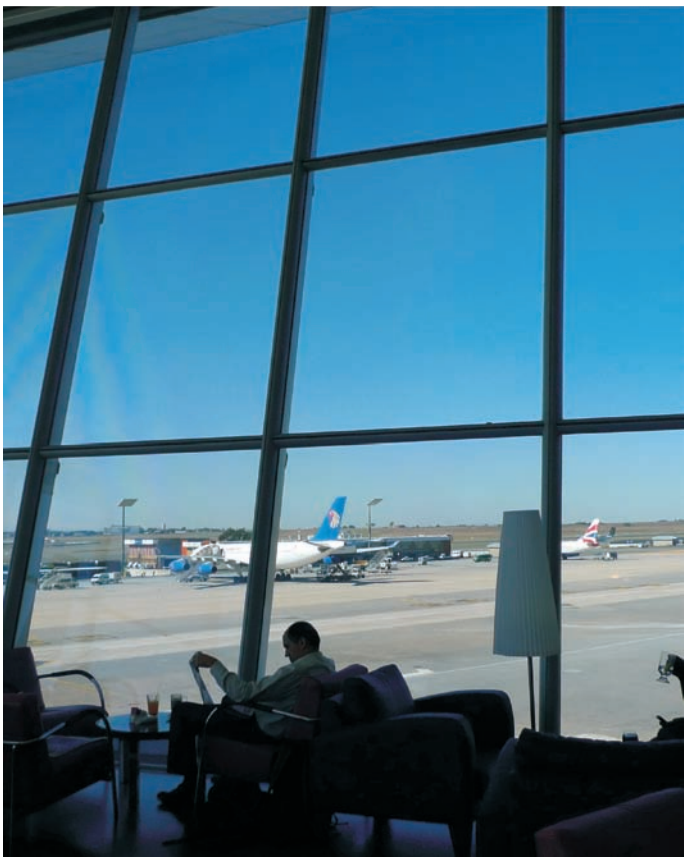
Various stock sizes and thicknesses are available. Recommended maximum size will depend on application and design load.

Superior sound reduction index



Sound control across the coincidence dip





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NOISE CONTROL

Reducing unwanted noise

Whether it's from traffic, aircraft, trains, factories or even neighbours, unwanted noise levels can be effectively reduced by selecting the appropriate glass product.

There are generally three components to be considered when solving noise problems: external noise; noise reduction qualities of the wall, windows and glazing and the noise level in the room.

The process of design requires that the external noise level is determined by measurement, but the desired internal noise level can be decided and specified.

The design challenge is to construct walls that reduce external noise level to the specified noise level required in the room - where the external noise is determined via measurement and the internal noise level is recommended (ISO 140).

For glass, this involves subtracting the Rw value of the external noise level from the internal level to determine the type of glass required.

Common Sound levels		Recommended Interior Noise Levels	
Environment	dB	Environment	dB
Threshold of hearing	0	Bedroom	30-40
Conversational speech	65	Classroom	35-40
Average traffic (kerbside)	70	Living room	40-45
Busy traffic	75	Private office	40-45
Loud traffic	80	Open office	45-50

Complexity:

- Individual variations: noise level acceptable to one person may prove to be unacceptable to another (individual variations when specifying Rw numbers).

- Frequency: the source of the noise determines the frequency. Traffic noise is considered a low frequency noise, while aircraft is classified as a high frequency noise.

A detailed solution would involve measuring the nature and intensity of the offending sound to select a glass product that could reduce the intensity sufficiently at all frequencies. Important to note is the fact that glass is usually only one part of the room hence all other components should be assessed as well.

Sound reduction index

- Rw is the weighted sound reduction in decibels to create a correction suitable for aural response.
- Every 10 dB is perceived as twice as loud, so that a 20 dB reduction would reduce the noise level by four times.