

## Sound Control Glass

The noise is used to represent all sounds made people getting uncomfortable. The sound in our daily life can separate to 3 kinds of measurements: sound volume, sound pitch, and sound tone. In addition to the sound, its frequency characteristic, intermittence, occurrence timing, or the listener's mental condition or emotion are also able to affect human being. It is the problem much closed to the psychology.

The population over concentrates into city and the developing of traffic, those caused the noise from surrounding only increasing everyday. When people stay in the house, the most important thing is the atmosphere of warm, peaceful, and quiet. Only the peace and quiet inside the house can lead people to enjoy the harmony of home.



The window of building is the weak for the noise insulation. Just as it allows light to pass, it also allows sound to pass through. In order to establish an ideal environment from the irritation of noise, it should begin from the overall space design to consider noise control and glass property. With the presentation of Sound Control Glass to the public, it gives a greater effect for sound insulation.

### How to choose glass as the material of sound insulation:

The points of choosing are the composition of multiple layers, high mass of unit area, different thickness for each layer, thick film of Laminated Glass, large section of hollow space of Insulating Glass, soft-like material of frame structure in order to have better result to absorb the energy of quake and vibration. The test shall be applied on the any kind of combination after it is designed and combined. This way can prevent the losing of requested environmental quality from the negative result of bad combination.

### Precautions for design and application

In the national standard of CNS, the main points for window property examination are: 1. Air tightness, 2. Water proof, 3. The toughness per standard of CNS-3092 & CNS-6400, 4. Sound insulation per standard of CNS-8466.

The main objective of the requirements of first 3 items is the consideration that window is the weakest part in the appearance for whole building. So the requirements of window shall be based on the consideration of safety.

Besides, the higher the building is, the greater effects of wind pressure and heavy rain are. It is a very strict examination for window in the air tightness, water proof, and toughness. Therefore, every window shall be verified by the test laboratory of wind-rain to ensure its reliability.

The 4th point is designed for the attention of the requirements of sound insulation. The wind sound of high altitude is the serious noise source for mansion and building. There is the regulation for the standard of noise insulation of building in the CNS-8465. In the other part, there are also regulations for the strength standard of sound insulation of insulated window in the CNS-10485 and CNS-10486. After the laboratory test, the test applier can know what level of sound insulation of tested window. It shall used to be the reference for the requests of sound insulation of building and actual demand.

## How to enhance the sound insulation effect of window

The first way to enhance the sound insulation effect of window is reducing the interstice of window frame in order to lower the possibility for sound passing. And then, the second is the insulation ability of glass material. In this case, the requirements of the air toughness and water proof are getting comparatively important. The choosing of material shall follow the scientific data and specification for adoption and design.

## The material of window glass

Because of the advancement of material research and development, there are many materials of window glass for choosing.

- Normal glass.
- Tempered glass: Strengthened by special treatment, and hard to break.
- Two sheets of normal glass with one interlayer of PVB. The layer can stick the fragments when broken.
- Two sheets of glass spaced by dry air or inert gas.

Above materials are much using generally. The 4th item, Insulating Glass, it is generally understanding as the glass for sound insulation by public. But if these 4 kinds of glasses combine systematically, the combination will be the better and excellent material for sound insulation.

## Characteristics

1. Air-proof
2. Water-proof

3. Strength : CNS-3092 , CNS-6400 ◦
4. Sound-control : CNS-8466 ◦

## Applications

- Curtain walls for airport.
- Buildings by highways or near airport.
- Buildings by subway and railway system.
- Buildings around factories.
- Hotel, restaurant, hospital.
- Concert halls, libraries, indoor activity center.
- Studio, KTV, window roof.

## Specification

Glass Type	Thickness	Max Size(mm × mm)	Min Size(mm × mm)
Laminated Glass	6 ~ 44	2440 × 6000	300 × 300
Insulating Glass	12 ~ 60	2500 × 4000	300 × 300
Laminated Insulating Glass	13 ~ 60	2440 × 4000	300 × 300

\* If you have any other special size requirements, please [contact us](#).

Download [Sound Transmission Loss \(TL\) Measurements, Butacite® PVB Interlayer](#)



\*Quoted From [DUPONT](#).