

Because Silence does not  
Steal Space

**INSOUND**<sup>®</sup>  
BARRIER



DESIGN COMFORT INSULATION

## INSOUND® - BARRIER

- **INSOUND® Barrier** is made from composition of high quality Ethylene Propylene Diene Monomer Rubber (EPDM) & Polyurethane (PU) which is medium density, high performance soundproofing membrane that offers excellent level of sound isolation.
- It is highly flexible sheet which means it can be adapted to any shape or surface and allows dealing easily with complicated layout.

Brief Description	High performance soundproofing membrane made from composition of high quality Ethylene Propylene Diene Monomer Rubber (EPDM) & Polyurethane (PU)
Colour	Black
Application	Wall, Floor, Under Deck of Residential & Commercial Buildings also applicable to Metal Plates within Engine, Compressor & Air Conditioning Unit

### STANDARD DIMENSION :

Thickness (mm)	3	4	5
Density (kg/m³)	900 - 1100		
Length (mm)	950		
Width (mm)	950		

### TECHNICAL DATA :

Material	Ethylene Propylene Diene Monomer Rubber (EPDM) & Polyurethane (PU)		
Density	900 – 1100 kg/m³	As per ISO 2781	
Hardness (Shore A)	60±10	As per ASTM D412	
Tensile Strength	Min. 10 kgf/cm²	As per ASTM D412	
Elongation at Break	Min. 30%	As per ASTM D412	
Sound Transmission Class (STC)	22dB (for 4mm Thickness)	As per ASTM E90 / ISO 10140-2 (Based on Simulation)	
Flammability	Pass	As per FMVSS 302 / IS 15061	
Temperature Resistance	-40°C to 110°C		
Storage & Shelf Life	Shall be stored indoors, in clean and dry conditions, away from direct sunlight – Max. 3 years		

## SOUND TRANSMISSION CLASS (STC) FOR DIFFERENT SOUND FREQUENCY :

- **Sound Isolation** : Sound isolation is the property of blocking off sound through use of materials that reduce sound transmission from the one side to other side.
- **Sound Transmission Class (STC)**: It is an integer rating of how well an insulation material attenuates airborne sound. The STC rating reflects the decibel reduction of noise that a material can provide under the laboratory condition.
- STC of 4mm thick **INSOUND® Barrier** at various sound frequencies as per ASTM E90 / ISO 10140-2 carried out by simulation.

Frequency (Hz)	Air Borne Sound Insulation Index (dB)	Frequency (Hz)	Air Borne Sound Insulation Index (dB)
100	8.8	630	19.7
125	9.6	800	21.3
160	10.7	1000	23.1
200	12	1250	24.8
250	13.3	1600	26.5
315	14.8	2000	28.3
400	16.4	2500	30.1
500	18	3150	31.9

- All data & technical information are based on results achieved under typical application conditions.

## FEATURES :

- Excellent at reducing the transmission of airborne sound
  - Mean sound reduction index  $R_w > 21\text{dB}$
  - Excellent durability
  - Offers long term performance without collapse or "bottoming" out under high point loads
  - Resistant to ageing and deformation
  - Highly sustainable and completely recyclable
  - Flexible, easy to install
  - Occupy minimum area
- **INSOUND® Barrier** is available in range of thickness, in combination with gypsum plaster board & other sound insulation material, Inner Engineering offers solution for any kind of building system and its application in industrial field.

## INSOUND® BARRIER APPLICATIONS :

### 1. FLOOR ACOUSTIC INSULATION

- In any multi story buildings the noise generated by occupants or any electronic components can be transfer to lower story from the floors which may disturb the others.
- Also many buildings have music room or disco room at higher stories which can transfer the noise to lower story.





- By placing **INSOUND® Barrier** above the floor the sound or noise transmission will be reduced and also it will absorb the vibration.
- Sometime **INSOUND® Barrier** will be used as a combination with other sound absorbing insulation material provided by Inner Engineering to get more reduction in sound isolation & sound transmission through floor.

## 2. WALL ACOUSTIC INSULATION

- In industries noise generated by mechanical component or machinery is very high which will transfer to the nearer offices through the walls.
- In hotels or theaters the noise created by people, TV, speakers will travel through walls to other rooms.
- **INSOUND® Barrier** can be fixed at walls to reduce the sound transmission of the noise through walls.
- Many times **INSOUND® Barrier** will be used as a combination with other sound absorbing insulation material provided by Inner Engineering to get more reduction in sound isolation & sound transmission through walls.



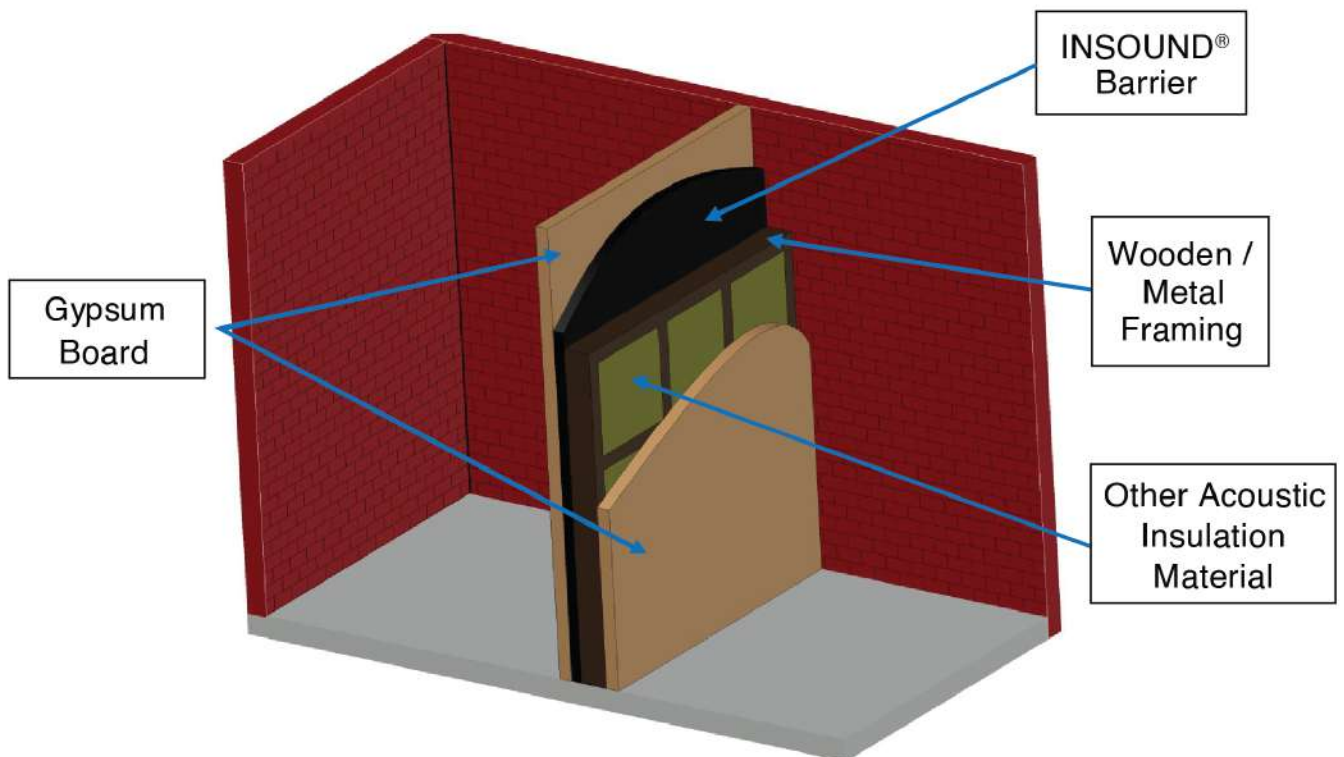
## 3. FAN ACOUSTIC INSULATION

- In many industries like textile industries, cement industries, oil & gas industries, chemical industries, automotive industries high power fans are used for many purposes.
- The continuous noise will generate because of mechanical components & high power motors from these fans.
- **INSOUND® Barrier** is a flexible & durable acoustic insulation material which isolates the noise and also absorbs the vibration.
- By using **INSOUND® Barrier** as acoustic insulation material to industrial high power fans, isolates noise & absorbs the vibration generated by rotary mechanical component.

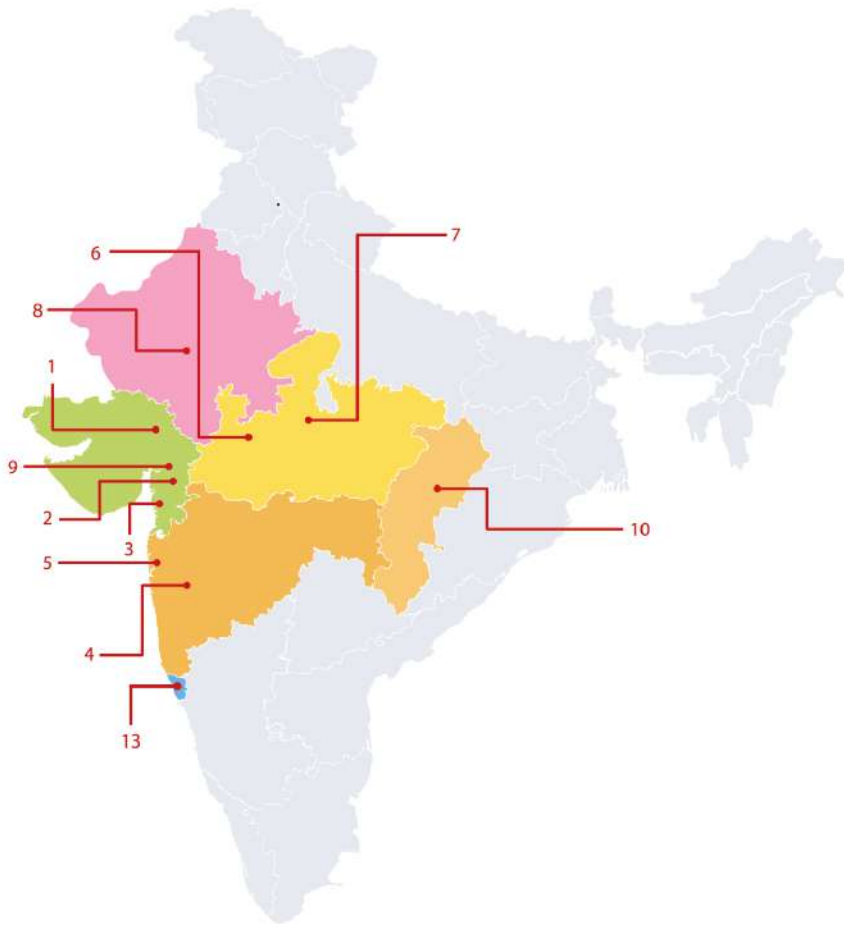


## USE OF INSOUND® BARRIER AS A COMBINATION :

- In many places like music rooms, theaters, auditoriums, machine room, the sound is generated in range of frequencies where isolation of sound with less eco inside room is required for better acoustic environment.
- To attain this **INSOUND® Barrier** can be used with other sound absorbing material like mineral wool, open cell nitrile rubber etc as combination. In this combination **INSOUND® Barrier** will work for sound isolation & open cell (absorbing) material work for reducing eco inside the room.
- The below figure shows the gypsum partition with use of combination of acoustic material to separate the rooms.



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