



InnoLayer - Heavy Sound Barrier

OVERVIEW

PVC Acoustic Sound Barrier is a high-density flexible sound insulation membrane designed to reduce airborne noise transmission through walls, ceilings, floors, and technical enclosures. Manufactured from mineral-filled heavy PVC, the material provides effective sound blocking across a wide frequency range while maintaining flexibility and ease of installation, making it an ideal solution for improving acoustic comfort in modern buildings, industrial environments, and marine interiors.

PRODUCT DESCRIPTION

This high-performance acoustic membrane is engineered to increase sound insulation by adding mass and damping to lightweight construction systems. Its dense yet flexible structure minimizes sound transmission through building elements and reduces vibration-borne noise transfer.

The product can be easily integrated into partition walls, suspended ceilings, flooring systems, machinery enclosures, and prefabricated panels. Despite its thin profile, it significantly improves acoustic performance when used alone or within multi-layer systems.

INSULATION PERFORMANCE

The high surface mass of the membrane significantly reduces airborne sound transmission by limiting vibration transfer through structural elements. It performs particularly well at mid and low frequencies where lightweight materials are typically insufficient.

Approximate single layer performance:

STC: 26–28

Rw: ≈27 dB

System improvement: +10 to +15 dB depending on wall/ceiling construction

When integrated into multi-layer wall or ceiling assemblies, total sound insulation performance can reach 45–55 dB depending on system design.

ADVANTAGES

- High mass for effective sound blocking
- Thin yet high-performance solution
- Flexible and easy to install
- Can be cut and shaped on site
- Compatible with standard construction systems
- Enhances acoustic comfort in lightweight structures
- Durable and long service life
- Suitable for new construction and retrofit projects

FIRE BEHAVIOUR

- Flame retardant formulation
- Self-extinguishing when flame source is removed
- Does not easily propagate flame
- Suitable for applications requiring improved fire reaction behaviour

TECHNICAL SPECIFICATIONS

Property	Value
Material	Mineral-filled flexible PVC
Color	Black
Thickness	2 mm
Density	4.7 kg/m ²
Standard sheet size	1 × 2 m
Flexibility	High – easily adaptable to curved surfaces
Acoustic rating (single layer)	STC 26–28 (approx.)
Sound reduction (Rw)	≈27 dB (single layer)
Performance in systems	+10 to +15 dB improvement depending on construction
Fire behaviour	Flame retardant, self-extinguishing
Operating temperature	0°C to +70°C (typical for PVC acoustic membranes)

KEY APPLICATIONS

Building & Architectural Use

Gypsum board partition walls
 Residential and office walls
 Meeting and conference rooms
 Hotels and hospitals
 Educational buildings
 Cinema and music rooms
 Mechanical rooms and shafts

Marine & Transport

Yacht and ship interior partitions
 Engine room surroundings
 Cabins and technical compartments

Industrial Applications

Machine enclosures
 Generator and compressor rooms
 HVAC equipment insulation
 Metal and composite panels

Installation

The membrane can be installed between gypsum boards, metal panels, wood panels, or flooring layers. It may be mechanically fixed, adhered, or used within sandwich systems. For optimal performance, joints should be tightly butted or overlapped and sealed to avoid acoustic leakage. Custom dimensions and multi-layer applications are available depending on project requirements.