

# Impact Insulation Class (IIC)

Impact noise comes from a person walking or running, an object falling on the floor or moving furniture.

Sound vibrations are transmitted through the building structure, joists and walls, creating discomfort and noise pollution.

Impact sound is measured in terms of impact sound insulation Class (IIC).

IIC is an index that measures the reduction of impact sound through a floor or ceiling. The higher the index, the better the sound insulation and soundproofing.

## Why use SONOpanX

- Absorbs both impact and airborne noise in the floor system
- Lightweight
- Easy to cut and install
- Maintains a continuous sound barrier
- Manufactured with 100% recycled wood
- Non-toxic
- Cost effective



# SONOpanX<sup>®</sup>

## Noise STOP Technology

Properties	Standard Limits	Nominal Value
Transverse load at breakage	ASTM C-209	≥ 3.57 kg ≥ 7.87 lb
Tensile strength perpendicular to surface	ASTM C-209	≥ 0.24 kg / cm <sup>2</sup> ≥ 3.41 lb / in <sup>2</sup>
Water absorption	ASTM C-209	5 %
Linear expansion	ASTM C-209	0.13%
Compressive strength (15% deformation)	ASTM C-209	26,003 kg / m <sup>2</sup> 5,326 lb / ft <sup>2</sup>
"R" factor / inch (1")	ASTM C-518	R = 1.5 RSI = 0.26

Physical Properties	Metric	Imperial
Density	256 kg / m <sup>3</sup>	16 lbs / ft <sup>3</sup>
Dimensions	1.22 m x 1.22 m	48 inch x 48 inch
Covering per sheet	1.49 m <sup>2</sup>	16 ft <sup>2</sup>
Thickness	11 mm	7/16 inch
Weight per panel	4.24 kg	9.33 lbs
Sheets per skid	110 sheets	

**Ecological Properties**  
 No VOC (g / l.) - Volatile organic compounds!  
 100% recycled and recyclable wood fiber

<sup>1</sup> - Some variations that can be observed in results depending on the type of raw material used.



### Ideal for soundproofing floors:

- Condos
- Multi-residential
- Townhouses
- Rental units

For any inquiries related to the installation or application of SONOpanX<sup>®</sup>. Please email us at [info@sonopan.com](mailto:info@sonopan.com) or call 1-800-561-4279



# SONOpanX<sup>®</sup>

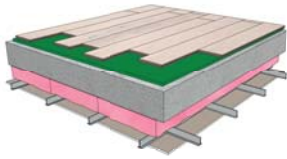
## Noise STOP Technology

# SUPERIOR SOUNDPROOFING FOR IMPACT NOISE



# Floor Assemblies

## Concrete slab construction - Engineered STC 62 IIC 65



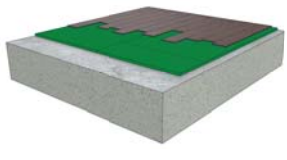
8.4 mm (21/64") Engineered floor  
11 mm (7/16") SONOpanX®  
152 mm (6") Concrete slab  
305 mm (12") Drywall hanger system  
88.9 mm (3.5") Insulation  
5.9 mm (5/8") Gypsum Type X

## Wood joist construction - Engineered STC 54 IIC 51



8.4 mm (21/64") Engineered floor  
11 mm (7/16") SONOpanX®  
51 mm x 254 mm (2"x10") Joist  
88.9 mm (3.5") Insulation  
12.7 mm (1/2") Resilient channel  
15.9 mm (5/8") Gypsum Type X

## Concrete slab construction - Laminate FIIC 59



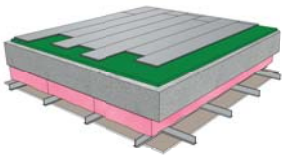
12 mm (1/2") Laminate flooring  
Underlay membrane  
11 mm (7/16") SONOpanX®  
205 mm (8") Concrete slab

## Wood joist construction - Vinyl STC 54 IIC 51



5.5 mm (13/64") SPC vinyl plank  
11 mm (7/16") SONOpanX®  
51 mm x 254 mm (2"x10") Joist  
88.9 mm (3.5") Insulation  
12.7 mm (1/2") Resilient channel  
15.9 mm (5/8") Gypsum Type X

## Concrete slab construction - Vinyl STC 62 IIC 65



5.5 mm (13/64") SPC vinyl plank  
11 mm (7/16") SONOpanX®  
Acrylic based floor glue  
152 mm (6") Concrete slab  
305 mm (12") Drywall hanger system  
88.9 mm (3.5") Insulation  
5.9 mm (5/8") Gypsum Type X

## Wood joist construction - Hardwood STC 56 IIC 57



19 mm (3/4") Hardwood floor  
11 mm (7/16") SONOpanX®  
51 mm x 254 mm (2"x10") Joist  
88.9 mm (3.5") Insulation  
12.7 mm (1/2") Resilient channel  
15.9 mm (5/8") Gypsum Type X  
15.9 mm (5/8") Gypsum Type X

## Installation

### Getting Started

Before installing SONOpanX® flooring panels, ensure that the installation site and conditions match those described in this guide. The panels must be protected from the elements at all times and should always be stored laying flat. SONOpanX® panels are not structural, a structural subfloor must be in place prior to installing SONOpanX®. These instructions correspond to residential and light commercial applications.

SONOpanX® should be installed with the dimple side facing down ensuring a tight fit between panels. Offset the rows by 24 inches (610 mm) and leave a gap of 1/4" (6 mm) around the perimeter of the room and around any opening made in the SONOpanX® (I.E. for a plumbing stack). Fill this gap with an acoustical sealant. Ensure the panels and installation site are level and debris free. Verify that the subfloor meets tolerances for the selected finished flooring. Secure subfloor down with screws and/or glue prior to installing SONOpanX® to prevent squeaks and movement that could create noise.

### Installation on Wood Subfloors

SONOpanX® panels can float or be stapled down using 1" (25mm) long crown staples. Place 9 staples in each panel consisting of 3 rows evenly spaced and 3" (75mm) from the edges. Staples should be countersunk to a depth of 1/16" (1mm) below the surface.

### Installation Over Concrete

SONOpanX® panels can float or be glued down using a urethane-based adhesive. When installing SONOpanX® on concrete subfloor, ensure that the concrete is fully cured. Apply adhesive with a 3/16" (5mm) v-notch trowel at a 45° angle. Roll panels with a flooring roller to ensure good adhesion. Follow the glue manufacturers application instructions. Allow the glue to dry for at least 24 hours before installing the finished flooring.

### Flooring installation

Flooring must be installed shortly after the installation of SONOpanX® to avoid unnecessary wear on the soundproofing panel.

Always follow the flooring manufacturers installation instructions and requirements.

### Floating Engineered wood and Laminate

Engineered wood and Laminate flooring can be installed over SONOpanX®. Clean installation area prior to proceeding and follow the flooring manufacturer's installation guide. Flooring should be installed as directed and underlayment products that would usually be required should still be used.

### Solid hardwood flooring

When installing a traditional hardwood floor (mechanically fastened), the hardwood should be nailed or stapled through SONOpanX® to the wooden subfloor using minimum 1 3/4" (44.5 mm) fasteners. Install a wax paper underlayment designed for hardwood floors over the SONOpanX® prior to installing the flooring.

### Locking Vinyl, Glued Down Floors & Glue Assist Engineered Floors

Locking vinyl floors of at least 3/16" (5 mm) thickness can be installed over SONOpanX®. Clean the installation area prior to proceeding and follow the manufacturer's installation guidelines for preparation of the subfloor. SONOpanX® panels must be fastened to the subfloor as directed. Install 1/4" (6 mm) Plywood or OSB on top of SONOpanX® prior to installing the finished flooring. This top layer should be fastened through to the original subfloor at 12" O.C throughout the field and 8" around the perimeter. For this reason, we do not recommend installing locking vinyl flooring with SONOpanX® over concrete. Use at least 1.5" (38 mm) long full thread screws that penetrate the existing subfloor by at least 3/4" (19 mm). Counter sink the screw heads but do not to overdrive the fasteners as it may create low spots in the floor.

### Tile

A tongue and groove plywood subfloor with a minimum thickness of 5/8" (16 mm) should be installed over SONOpanX® and secured through to the existing subfloor prior to installing tile.

These instructions correspond to residential and light commercial applications. For additional details, contact your local MSL representative.

**Warning:** Adhesives containing solvents are not compatible with SONOpanX® acoustic panels.

\* The indicated STC / FSTC / IIC performances on drawings can vary according to the physical properties of the materials in the assembly and their installation.

\*Adding SONOpan® panels to the ceiling will help further increase the airborne noise reduction and STC rating.

**MSL**

MSL  
161 St-Paul St. P.Box 38 Louiseville Quebec J5V 2L6  
Toll free: 1-800-561-4279

MSLfibre.com

**MSL**

SONOpan.com