Sound Transmission Class (STC)

These are the decibels (dB) which express the unit of intensity, pressure or sound power. They are calculated by a logarithmic relationship between the measured value and the reference value. Complete silence corresponds to a sound level of 0 dB, a business office in operation, 60 dB, a car in circulation, 80 dB and a plane taking off, approximately 100 dB. The noise level between the transmitter and the receiver should decrease with distance and obstacles. Between two dwellings, a wall or ceiling can be used to reduce sound transmission.

Suppose you are in a room next to an other one where two people are chatting. Depending the construction of the wall and its acoustic performance, the STC indices indicate what you can hear ...

STC 35:
A normal voice discussion is audible and intelligible.

STC 40:
A loud voice is audible but unintelligible.

STC 45:
A loud discussion is barely audible.

STC 50:
A loud voice is almost no longer heard.

STC 55:
A loud discussion is inaudible.

A sound transmission class (STC) is calculated in decibels. The higher this index, the higher the level of perceived noise is attenuated.

BENEFITS SUMMARY OF SONOPAN PANELS

- Not expensive;
- Absorb a wider range of sound frequencies;
- With stable physical dimensions;
- Lightweight, easy to cut and install;
- Offering a continuous acoustic barrier;
- Made with recycled wood fibers;
- Non toxic;
- Available at most building materials retailers;

FOR OPTIMAL SOUNDPROOFING

SONOPAN is an environmentally friendly high-performance soundproofing panel with patented technology. Provided with dimensions of cavities and various depths on both sides, **SONOPAN** absorbs a greater frequency range thereof, significantly reducing the transmission of noise and vibration from one room to another. **SONOPAN** panel is the best choice for your soundproofing projects such as multi-housing, condominiums, two-generation building, home theaters, music studios, bath rooms, etc.

Installation guide for walls and ceilings

Step 1 (Ceiling)
Fasten **SONOPAN** to joists (or existing drywall if retrofitting) using drywall screws every 12" at the perimeter and centre of the panel.

Step 2 (Walls)
Fasten **SONOPAN** to studs (or existing drywall if retrofitting) using drywall screws every 12" at the perimeter and centre of the panel butting the panel up against the SONOPAN on the ceiling.

Step 3 (Ceiling)
Fasten the resilient channels perpendicular to the joists every 12" and according to the manufacturer's specifications
i – install the 1st channel 6" from the wall
ii – install the following channels 12" apart
iii – install the last channel 6" from the opposite wall

Fasten the first row of drywall to the resilient channels using drywall screws, according to the manufacturer's specifications.

Step 4 (Walls)
Fasten the resilient channels perpendicular to the studs every 24" and according to the manufacturer's specifications
i – install the 1st channel 2" from the ground
ii – install the following channels 24" apart
iii – install the last channel 6" from the ceiling

Fasten the first row of drywall to the resilient channels using drywall screws according to the manufacturer's specifications.

Step 5 (Walls and ceiling)
Install 2nd row of drywall starting from the ceiling and finishing with the walls, according to the manufacturer's specifications.

Installation Tips:

Apply acoustical sealant to the perimeter of each **SONOpan** panel as well as to the perimeter of walls and ceilings. Seal any gaps with acoustical caulking.

Always ensure that **SONOpan** is protected from the elements during installation and until project is complete

SONOpan cuts with a circular saw or very sharp knife, if a knife is used cut entirely though the panel, do not score and snap

SONOPAN®
Noise Stop Technology™

Properties	Standards	Nominal values
Transverse load at rupture	ASTM C-209	6.80 kg 15 lb
Tensile Strength parallel to surface	ASTM C-209	4.28 kg / cm^2 60.7 lb / po^2
Water absorption	ASTM C-209	4% P / V max.
Linear expansion	ASTM C-209	0.13%
Compressive Strength (10% deformation)	ASTM C-165	1.41 kg / cm^2 20 lb / po^2
Thermal value	ASTM C-518	R = 2.45 RSI = 0.43

Physical properties	Metric	Imperial
Density	224.26 kg / m^3	14 lb / pi^3
Dimensions	1.22 m x 2.44 m	48 po x 96 po
Area covered per panel	2.97 m^2	32 pi^2
Thickness	19.05 mm	3/4 po
Weight per panel	11.5 kg	26 lb
Number of panel / skid	65 panneaux	

Environmental properties:
0% - VOC (g/l) – Volatile organic compounds
100% recycled and recyclable fibres

Approved by CCMC #12419-R

Ideal for projects including:
● Movie theaters ● Music studios ● Adjoining walls
● Condos ● Multi-Dwellings ● Townhouses ● Bathrooms
● Garages ● Basements ● Conference rooms ● and more...

SONOPAN®
Noise Stop Technology™

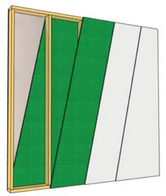
THE FIRST CHOICE FOR YOUR SOUNDPROOFING PROJECTS

MSL
161 St-Paul, PoBox 38, Louiseville, Quebec, J5V 2L6
Toll free: 1-800-561-4279
MSLfibre.com

MSL
MSLfibre.com

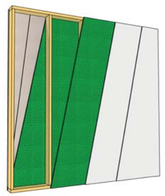
Wall Assemblies

New Construction — STC 51*



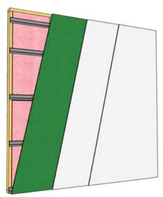
Type X Drywall 15.9 mm (5/8")
SONOpan 19 mm (3/4")
Wood studs 50.9 mm x 139.7 mm
(2 "x 6") at 610 mm (24") c.c.
SONOpan 19 mm (3/4")
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")

New Construction — STC 53*



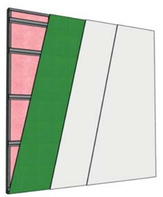
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")
SONOpan 19 mm (3/4")
Wood studs 50.9 mm x 139.7 mm
(2 "x 6") at 610 mm (24") c.c.
SONOpan 19 mm (3/4")
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")

New Construction — STC 58*



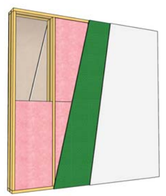
Type X Drywall 15.9 mm (5/8")
Wood studs 50.9 mm x 101.6 mm
(2" x 4") at 610 mm (24") c.c.
R-12 Batt Insulation
Resilient channel at 610 mm (24") c.c.
SONOpan 19 mm (3/4")
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")

New Construction — STC 58*



Type X Drywall 15.9 mm (5/8")
Metal studs 50.9 mm x 101.6 mm
(2" x 4") at 610 mm (24") c.c.
R-12 Batt Insulation
Resilient channel at 610 mm (24") c.c.
SONOpan 19 mm (3/4")
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")

New Construction — STC 68*

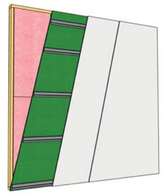


Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")
Wood studs 50.9 mm x 101.6 mm
(2" x 4") at 610 mm (24") c.c.
R-12 Batt Insulation
25.4 mm (1") Air space
R-12 Batt Insulation
Wood studs 50.9 mm x 101.6 mm
(2" x 4") at 610 mm (24") c.c.
SONOpan 19 mm (3/4")
Type X Drywall 15.9 mm (5/8")

New Construction — STC 68*

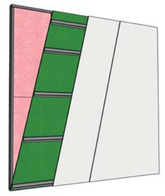
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")
Metal studs 50.9 mm x 101.6 mm
(2" x 4") at 610 mm (24") c.c.
R-12 Batt Insulation
25.4 mm (1") Air space
R-12 Batt Insulation
Metal studs 50.9 mm x 101.6 mm
(2" x 4") at 610 mm (24") c.c.
SONOpan 19 mm (3/4")
Type X Drywall 15.9 mm (5/8")

New Construction — STC 56*



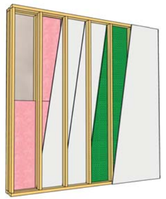
Type X Drywall 15.9 mm (5/8")
Wood studs 50.9 mm x 101.6 mm
(2" x 4") at 610 mm (24") c.c.
R-12 Batt Insulation
SONOpan 19 mm (3/4")
Resilient Channels at 610 mm (24") c.c.
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")

New Construction — STC 56*



Type X Drywall 15.9 mm (5/8")
Metal studs 50.9 mm x 101.6 mm
(2" x 4") at 610 mm (24") c.c.
R-12 Batt Insulation
SONOpan 19 mm (3/4")
Resilient Channels at 610 mm (24") c.c.
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")

Partition wall (new construction)[1] — FSTC 56*



Type X Drywall 15.9 mm (5/8")
Wood or Metal studs
50.9 mm x 101.6 mm (2" x 4") at
406 mm (16") c.c.
R-12 Batt Insulation
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")
25.4 mm (1") Air space
R-12 Batt Insulation
Wood or Metal studs
50.9 mm x 101.6 mm (2" x 4") at
406 mm (16") c.c.
SONOpan 19 mm (3/4")
Type X Drywall 15.9 mm (5/8")

For suggested assemblies in this brochure, confirming sound transmission indices (FSTC), the mention "F" means "Field" for measurements taken on site.

Systems offering a fire resistance of 60 minutes according to CAN / ULC S-101:

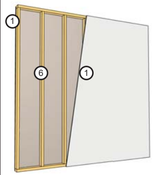
UL designs: U309, U314, U423, U465
ULC designs: W301, W415, and W453.

1 - This assembly can be applied to a load-bearing wall, in accordance with the National Building Code of Canada (2015) for this type of construction.

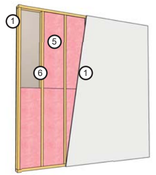
Partition wall (new construction) — FSTC 57*

Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")
Wood or Metal studs
50.9 mm x 101.6 mm (2" x 4") at
406 mm (16") c.c. (non-isolated)
12.7 mm (½") Air space
SONOpan 19 mm (3/4")
Concrete block wall 203.2 mm (8")
SONOpan 19 mm (3/4")
12.7 mm (½") Air space
Wood or Metal studs
50.9 mm x 101.6 mm (2" x 4") at
406 mm (16") c.c. (non-isolated)
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")

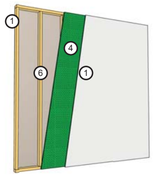
Comparative table, interior walls, wood or metal studs (New construction)



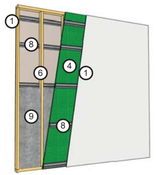
4-½"
Empty wall
STC 32



4-½"
Insulated wall
STC 34



5-¼"
Wall with SONOpan panel
(without insulation)
STC 43



6-¼"
Wall with SONOpan panel
and resilient channel
STC 50

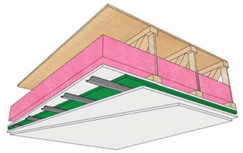
Other wall composition
STC 60

SUGGESTED RENOVATION ASSEMBLY

Walls with addition
STC 56 (Estimated value)

Existing wall:
Drywall
Wood or metal studs
50.9 mm x 101.6 mm
(2" x 4") aux 406 mm (16") c.c.
R-12 Batt Insulation
Drywall

Adding:
SONOpan 19 mm (3/4")
Resilient Channels at 610 mm (24") c.c.
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")

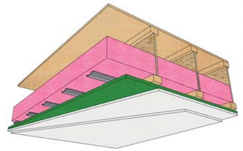


Ceilling with addition
STC56 (Estimated value)

Existing ceilling:
Open joist 300 mm (12")
Batt Insulation (R-20 min.)
Drywall

Adding:
SONOpan 19 mm (3/4")
Resilient Channels
at 610 mm (24") c.c.
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")

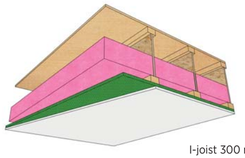
New Construction — STC 56*



I-joist 300 mm (12")
Batt Insulation (R-20 min.)
SONOpan 19 mm (3/4")
Resilient Channels
at 610 mm (24") c.c.
Type X Drywall 15.9 mm (5/8")
Type X Drywall 15.9 mm (5/8")

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

New Construction — STC 50*



I-joist 300 mm (12")
Batt Insulation (R-20 min.)
SONOpan 19 mm (3/4")
Type X Drywall 15.9 mm
(5/8")

1 Drywall panel 1/2"
2 Type X Drywall 5/8"
3 Air space 1"
4 SONOpan panel
5 Batt insulation
6 Wood studs 2"x4"
7 Metal studs 2-1/2"
8 Resilient channel
9 Blowing insulation

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