SoundSmart
SOUNDPROOFING PANEL

INSTALLATION, STORAGE, AND HANDLING GUIDE

STC 71 INTERIOR WALL ASSEMBLY

BUILDING PRODUCTS OF CANADA CORP.
SINCE 1905

Building Products of Canada Corp. | 9510 St-Patrick St., Lasalle, QC. H8R 1R9 | bpcan.com

FIELD STORAGE AND HANDLING

SoundSmart panels should be stored inside, on a flat surface, under suitable conditions to ensure that they are not damaged. If left outside, ensure panels are laid on a flat surface, at a minimum of 100 mm (4 in) off the ground and are covered and well protected from the elements.

> ***NEVER LEAVE SOUNDSMART PANELS OUTSIDE, UNPROTECTED.***

Panels with broken edges or punctures should not be installed. Carefully trim them to remove the damaged parts and reuse them in areas requiring smaller panels.

FASTENING - BEST PRACTICE

Use screws to fasten **SoundSmart** panels. ***Nails and staples are not recommended for this wall assembly***.

- Install **SoundSmart** panels vertically starting at corner or at the end of a wall band, with aluminum membrane facing the noise source.
- Fasten panels to framing members starting from the center of the sheet toward edges.
- Drive screw head flush with surface, do not countersink.

INSTALLATION

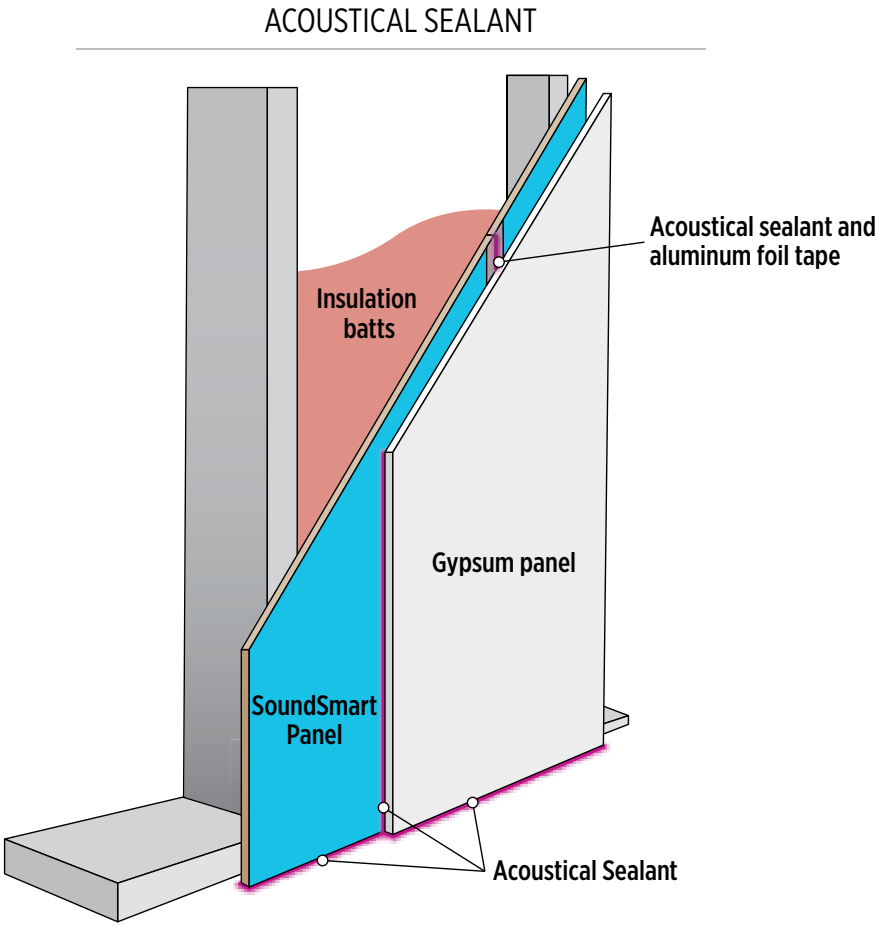
The following installation instructions can provide an STC rating of 71, as validated by the National Research Council of Canada (NRC – CNRC).

1. Wall Framing

Build two wall partitions using 38 mm × 92 mm (2 in × 4 in) 25-gauge steel studs, spaced 610 mm (24 in) on-center, leaving a 25 mm (1 in) air space between the two wall assemblies.

2. Soundsmart Panel *(see page 5 for fastening patterns)*

Install **SoundSmart** panel with aluminum foil facing away from channels. Using 32 mm (1 ¼ in) Type-S drywall screws spaced 610 mm (24 in) on-center, fasten **SoundSmart** panels to the studs. To reduce flanking noise to a minimum, seal all gaps at joints and along perimeter using an acoustical sealant and cover with adhesive aluminum foil tape. For proper installation of sealant*, a minimum gap of 3 mm (1/8 in) up to 6 mm (1/4 in) is recommended between panel joints and with all surrounding structural elements.



* Follow manufacturer's installation guidelines for acoustical sealant application.

3. Finish by Installing Two Layers of Drywall *(see page 5 for fastening patterns)*

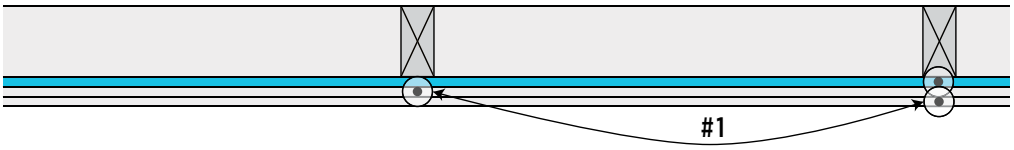
Complete by installing two layers of 15.9 mm (5/8 in) Type X gypsum panels. Stagger the panel joints of the base layer gypsum panel by one stud spacing from the panel joints of the **SoundSmart** panel and repeat the staggering of the panel joints with the top layer gypsum panel.

a. Fasten the base gypsum panel to the steel studs using 41 mm (1 ⅝ in) Type-S drywall screws, spaced 305 mm (12 in) on-center along the top plate and bottom plate and spaced 610 mm (24 in) on-center for the vertical studs.

b. Fasten the top gypsum panel to the steel studs using 57 mm (2 ¼ in) Type-S drywall screws, spaced 305 mm (12 in) on-center along the top plate and bottom plate and spaced 610 mm (24 in) on-center for the vertical studs.

c. Repeat the application of sealant* at panel joints and in gaps surrounding base and top layers of gypsum panels.

STAGGERING OF THE JOINTS



#1 Stagger all subsequent panel joints.

N.B. *It is recommended to stagger panel joints by one stud spacing (24"), however a minimum of 12" is acceptable.*

4. Filling Wall Cavity With Insulation

Fill one of the two cavities using 152 mm (6 in) thick sound attenuation or regular R-19 fiberglass insulation batts and fill the other wall cavity with 92 mm (3 ⅝ in) thick sound attenuation or regular R-12 fiberglass insulation batts.

*Follow local building codes in terms of fire resistance requirements for sealant for top and bottom layers of gypsum panels.

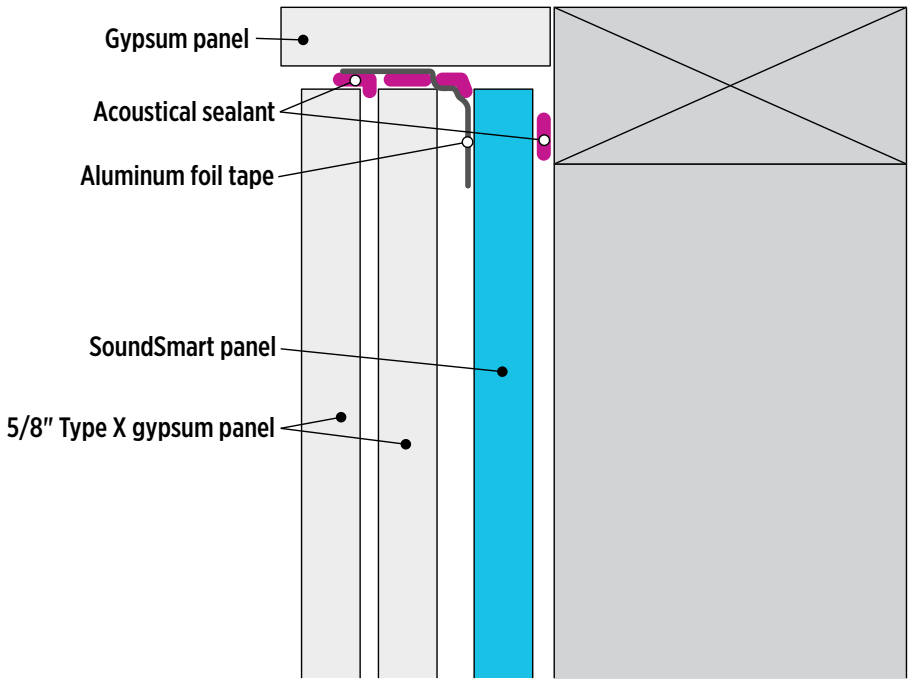
5. Close Off the Second Wall Assembly Repeating Steps 2 and 3.

Close off the wall assembly using one layer of **SoundSmart** panels and two layers of 15.9 mm (5/8 in) Type X drywall. Ensure that the **SoundSmart** panel joints are staggered from the joints of the base layer gypsum panels. Repeat with the top layer gypsum panels. To reduce flanking noise to a minimum, seal all gaps at joints and in gaps surrounding base and top layers of gypsum panels using acoustic sealant or fire-resistant sealant.*

6. Gypsum Panel Joint And Gap Treatment

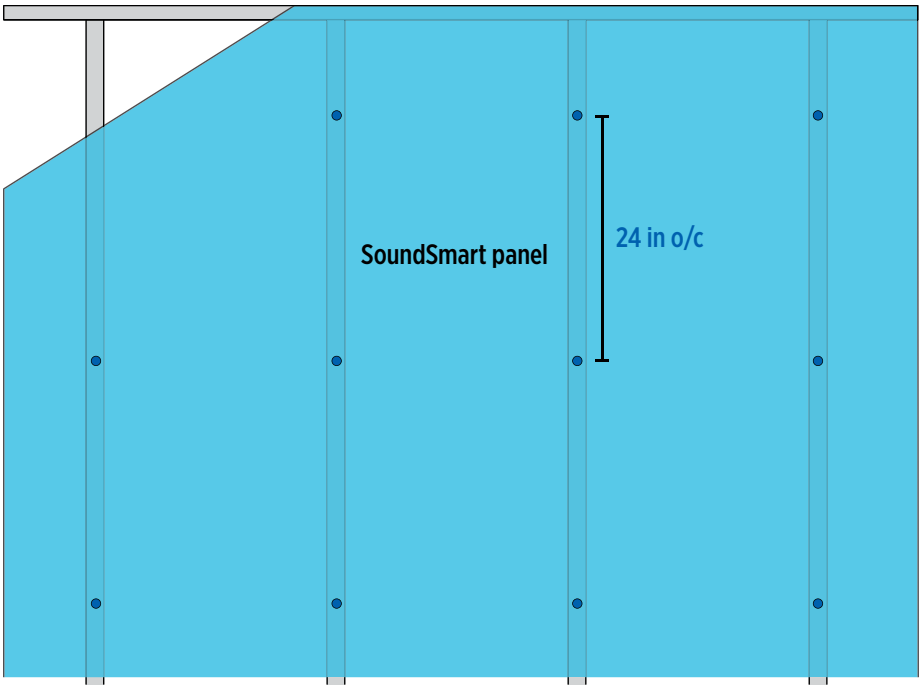
Finish all joints and gaps with tape and joint compound, according to manufacturer's instructions.

WALL AND CEILING ASSEMBLY DETAILS



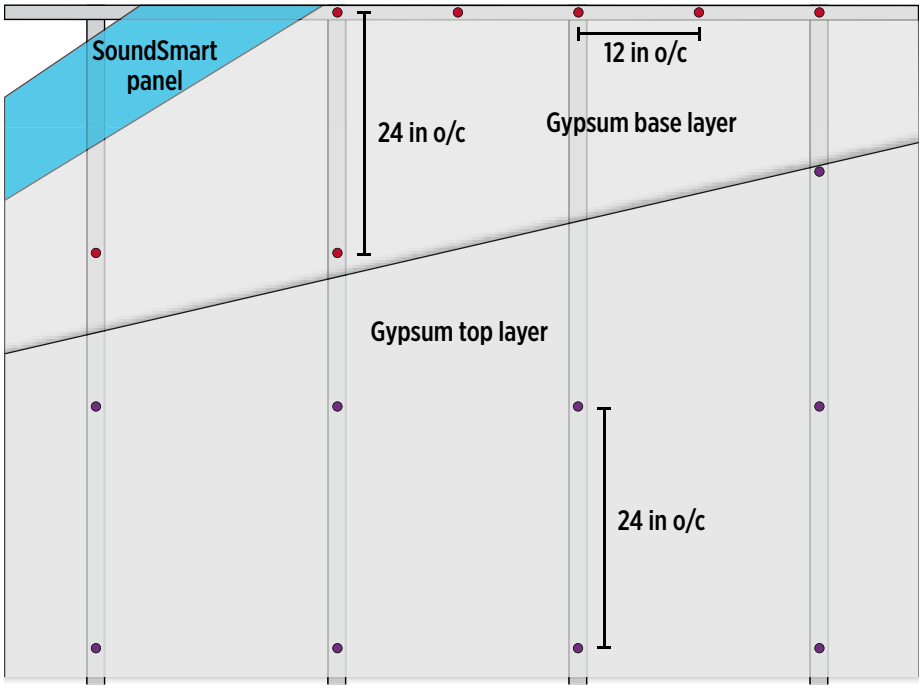
*Follow local building codes in terms of fire resistance requirements for sealant for top and bottom layers layer of gypsum panels.

STC 71 WALL ASSEMBLY | SoundSmart panel fastening



- Using 32 mm (1 ¼ in) Type-S screws, fasten the SoundSmart panel into studs @ 24" o/c.

STC 71 WALL ASSEMBLY | Gypsum panel fastening



- Using 41 mm (1 ⅝ in) Type-S screws, fasten base layer gypsum panel @ 12" o/c along the top plate and bottom plate and @ 24" o/c for vertical studs.
- Using 57 mm (2 ¼ in) Type-S screws, fasten top layer gypsum panel @ 12" o/c along the top plate and bottom plate and @ 24" o/c for vertical studs.

*Follow local building codes in terms of fire resistance requirements for sealant for top and bottom layers layer of gypsum panels.

CODE COMPLIANCE

The National Building Code (NBC 2015, Div. B, Sentence 9.11.1.1) requires that separating assemblies between dwellings provide a sound transmission class (STC) rating of not less than 50. Flanking or indirect sound travelling through small openings and junctions between walls and floors is a determining factor in the overall acoustic performance of an acoustic assembly. Consult a professional acoustic specialist to optimize the acoustic performance of your wall or floor assembly and ensure the compliance to all standards mandated by national and local building codes.

*Suivre le code de construction applicable concernant les exigences au niveau des scellants pour la résistance au feu de l'assemblage des plaques de plâtre.