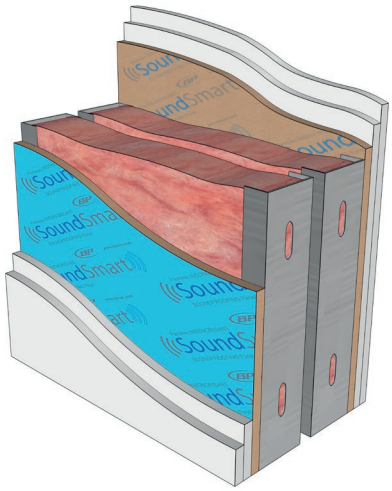
BUILDING PRODUCTS OF CANADA CORP.

FOR OVER 100 YEARS



SoundSmart

STC 71

INTERIOR WALL ASSEMBLY

APPLICATION INSTRUCTIONS

FIELD STORAGE AND HANDLING

SoundSmart panels should be stored inside, laid flat and under conditions appropriate to their use. Cover and protect well when stored outside at min 100 mm (4 in) off the ground. Never leave fiberboard panels outside unprotected.

Panels with broken edges or punctures should not be installed. Use them in areas where they can be cut clean for further usage.

FASTENING

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

- Install **SoundSmart** panels vertically starting at a corner or at the end of a wall band, with aluminum membrane facing the source of noise.
- Fasten sheathing to framing members starting from the center of the sheet toward edges, then around window and door openings.
- Set screws at precisely 9.5 mm (3/8”) from edges for all panel joints and at 19 mm (3/4”) for all other edges and perimeters to firmly anchor the screw into the framing member.
- Drive screw head flush with surface, do not countersink.
- In order to benefit from the decoupling effect of a resilient metal channel, make sure that the screws used to fasten the panel to the resilient channel will not penetrate nor contact the studs.

INSTALLATION

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

1. Build a double 38x89 mm (2 x 4) non-loadbearing steel stud wall with members spaced 610 mm (24 in) on-center, leaving an air gap of 25 mm (1") between the rows.
2. Apply one layer of SoundSmart panels directly on one side of the double wall with aluminium membrane facing away from steel studs. Fasten using 32 mm (1-1/4") type S Bugle head screws at 610 mm (24 in) o.c. along the edges and in the field. Make sure that the screws do not contact the studs. Seal all gaps at joints and perimeter using an acoustical sealant and cover with an adhesive aluminum foil tape.
3. Apply two layers of 15.9 mm (5/8 in) Type X gypsum boards. Offset the base layer of gypsum boards and SoundSmart panels by at least one stud spacing and repeat with the top layer of gypsum boards. Use 41 mm (1-5/8") Type-S drywall screws to fasten the base layer and 51 mm (2") type-S drywall screws for the top layer at 305 mm (12 in) o.c. along edges and 610 mm (24 in) o.c. in the field. Make sure that the screws do not contact the studs.
4. Fill the wall cavity with 152 mm (6") thick sound attenuation batts or regular R12 fiber glass batts. Add 92 mm (3 5/8") thick fibreglass batts to fill the rest of the cavity.
5. Repeat steps 2 and 3 to close the partition, applying two layers of gypsum boards over one layer of SoundSmart panels.
6. Finish all the joints and gaps with a fiberglass mesh tape and joint compound, according to manufacturer's instructions.

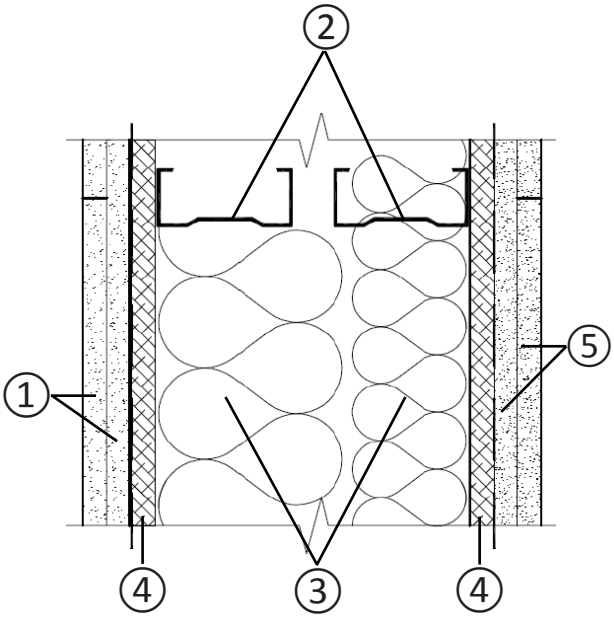
① Type X gypsum board (15.9-mm thick)

② Non-loadbearing steel studs spaced at 610 mm o.c. (38-mm x 92-mm)

③ Glass fiber insulation batts (89-mm thick)

④ SoundSmart panel (15.9-mm thick)

⑤ Type X gypsum board (15.9-mm thick)



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 traveling 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 should 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.