

SHEATHING APPLICATION INSTRUCTIONS



WOOD, PLASTICS and COMPOSITES
Structural Insulating Sheathings

Building Products of Canada Corp.
07/12 06 16 13

HIGH PERFORMANCE SHEATHING, MADE BY BP BUILDING PRODUCTS OF CANADA CORP.

When applied according to the manufacturer's instructions and once the joints are sealed, these insulation panels (combined sheathing and air barrier) constitute the main component of an airtight exterior housewrap that performs over and above the standards required by the National Building Code, 0.02 l/s•m². It is the level of performance every designer or architect aims for.

EXCEL also serves as intermediate waterproof sheathing and features remarkable sound deadening properties that reduce outside noise. And because it is also a structural board, EXCEL boasts excellent racking strength to help stabilize the frame.

AIR BARRIER SYSTEM PERFORMANCE

EXCEL and their sealed joints combine to form the principal element of the air barrier system. Other elements include doors, windows and any other penetrations in the wall, not to mention the joints, which must be made impermeable to air with the use of tape and perimeter sealant.

The air barrier system must be continual and free of gaps at construction, fissured and expansion joints, at intersections with other parts of the system (openings, roof or other), and also where elements (ducts, etc.) cross through the exterior walls. It must be designed and applied in such a way as to withstand any impact to the system caused by wind.

The air infiltration rate, through the main component of the combined air barrier and sheathing system measured under a differential pressure of 75 Pa, will be equal or inferior to 0.0015 l/s•m².

PACKAGING AND STORAGE

Whether in the field or in a warehouse, the sheathing insulation panels must be stored a minimum 152.4 mm (6 in.) from the floor or ground and sheltered from rain or snow with a waterproof cover.

PRODUCTS

WOOD FIBRE INSULATION PANEL

EXCEL High Performance insulation sheathing is made of a rigid wood fibre panel with an air barrier skin to block wind, rain and snow while letting water vapour escape to the outside of the wall. This gives the panels a thermal resistance rating of RSI 0.26/12.7 mm (R1,5 / 1/2 in.) thick.

ACCESSORIES

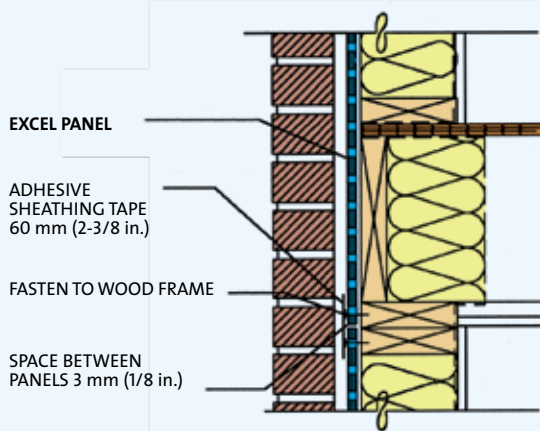
- Mechanical fasteners: minimum 44 mm (1-3/4 in.) galvanized roofing nails with an 11 mm (7/16 in.) head and a 3 mm (1/8 in.) shank. Do not recess nail head.
- Staples: crown not less than 25.4 mm (1 in.) and not less than 1.6 mm (1/16 in.) in diameter with a min length of 28 mm (1-3/32 in.) – *the National Building Code or NBC allows staples having a min crown of 9.5 mm (7/16 in.)*. Staples must be applied parallel to the studs.
- Membrane flashing and self-adhering polyethylene flashing: 0.5 mm (20 mils) thick; adhesive compatible with materials over which it is to be applied.
- Sheathing tape: in compliance with the CCMC's Registry of Product Evaluations, report 07281, minimal width of 60 mm (2-3/8 in.) for flat joints and 100 mm (4 in.) for corner joints; 1585 CW-P2/48001 "Sheathing Tape" type or Tuck 20502 "Contractor's Sheathing Tape".
- Perimeter caulking: mastic sealant that retains its flexibility and adhesive capacity as well as all other remaining physical properties in a temperature range of -40°C to 82°C (-40°F to 180°F); acoustic-type, in compliance with the CAN/CGSB 19.21M87 standards.



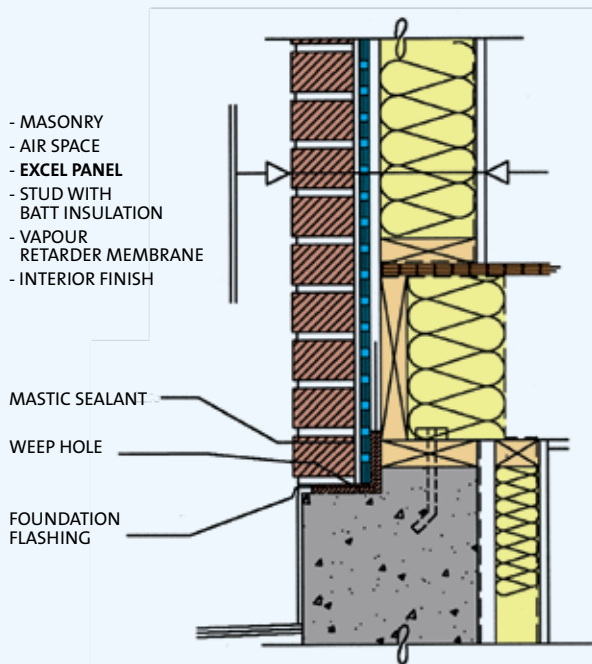
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RIGID EXTERIOR AIR BARRIER SYSTEM

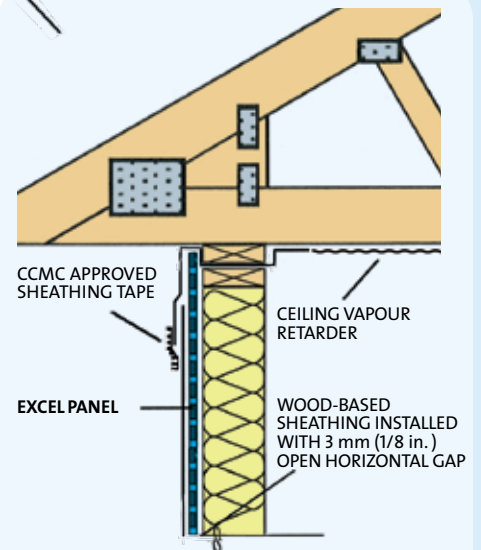
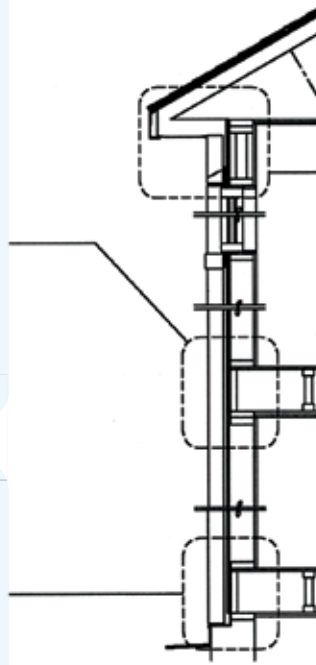
NB.: The use of mastic sealant is recommended to ensure continuity in the air barrier in and around areas where it is impossible to use sheathing tape (e.g. over polyethylene flashings) or where there are no framing studs or other supporting element (e.g. around plumbing or ventilation ducts, etc.)



DETAIL 1 HORIZONTAL PANEL JOINT
MASONRY CLADDING



DETAIL 2 FOUNDATION WALL



Apply pressure with hands for the tape to adhere.

FASTENING

Fasten EXCEL panels to the wood framing studs, which should be 305 mm (12 in.), 406 mm (16 in.) or 610 mm (24 in.) on centre. If these conditions cannot be met, please consult a BP Building Products technical representative. It is required that you leave an air space between the siding and the back of the wall to ensure adequate ventilation for the sheathing panel at all times.

To this end, make sure the building contractor installs 25 mm x 50 mm (1 in. x 2 in.) or 25 mm x 75 mm (1 in. x 3 in.) vertical, horizontal or 45° furring strips to act as a nailing base for the siding, or, where applicable, that the mortar does not protrude out the back of the brick siding.

Begin fastening near the centre of the panel and progress outwards toward the edges, spacing nails 305 mm (12 in.) apart across the framing studs. Then, fasten panel edges and along framing members at window and door openings every 152.4 mm (6 in.). Nails should not be less than 10 mm (3/8 in.) from panel edge. The nail head should be driven directly flush to the surface in order to ensure the tightness of air barrier.

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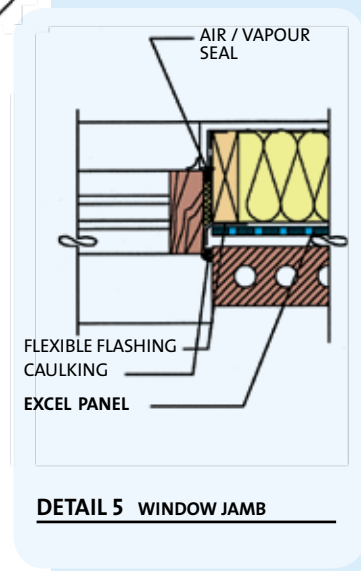
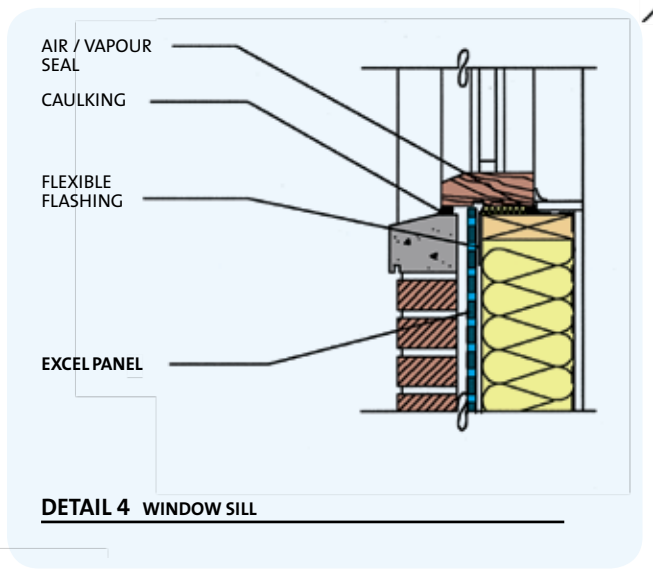
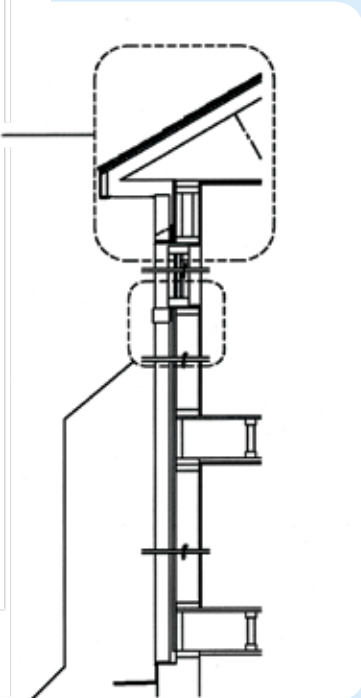
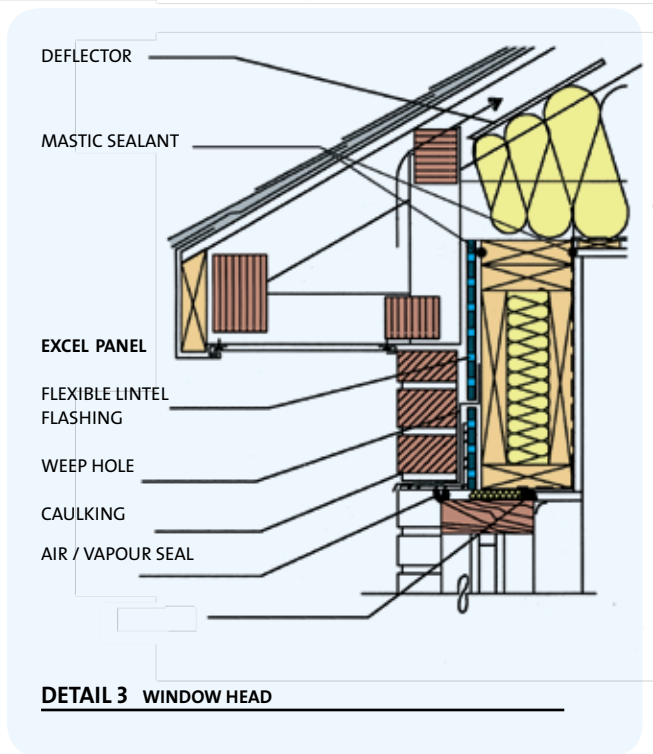
GENERAL

Before work begins, make sure the framing studs over which the panels are to be applied are spaced as required. Make necessary changes with the help of wood nailing bases.

APPLICATION OF SHEATHING PANELS

- 1) Install sheathing panels only when all support/framing materials are dry.
- 2) Install sheathing and prescribed accessories to form an uninterrupted air barrier and provide continuous thermal protection around the entire building.
- 3) If required, carefully adjust sheathing around accessories, plumbing pipes, ventilation liner and other applicable penetrations.
- 4) Carefully cut and size sheathing to generously cover empty spaces and gaps. Joints should be 3 mm (1/8 in.) apart. Offset vertical joints. Panels with broken edges or with punctures should not be installed. Use the largest possible panels to keep the number of joints to a minimum.
- 5) Apply sheathing tape to a clean panel and apply pressure to ensure proper adhesion over every joint. Make sure it overlaps the joint by at least 25 mm (1 in.) on either side, and by at least 50.8 mm (2 in.) for internal or external corner joints. Do not install sealing tapes on EXCEL panels when raining or when the surface is damp.

NB.: For extra air, water and sound proofing of the air barrier panel/tape system, over and above the use of sheathing tape, fill the joints with a mastic sealant, making sure not to overfill beyond the side of the joint (if necessary, use a compressible roll of closed cell neoprene foam).

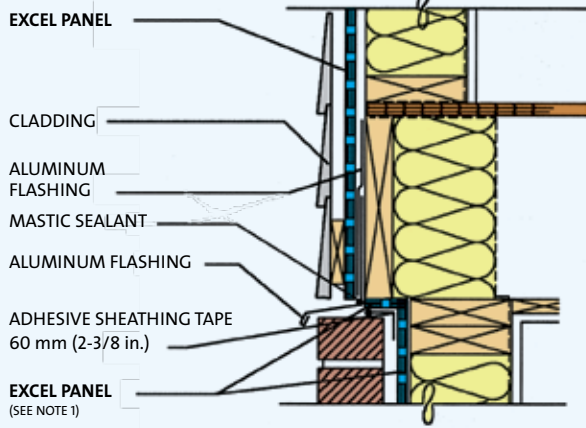


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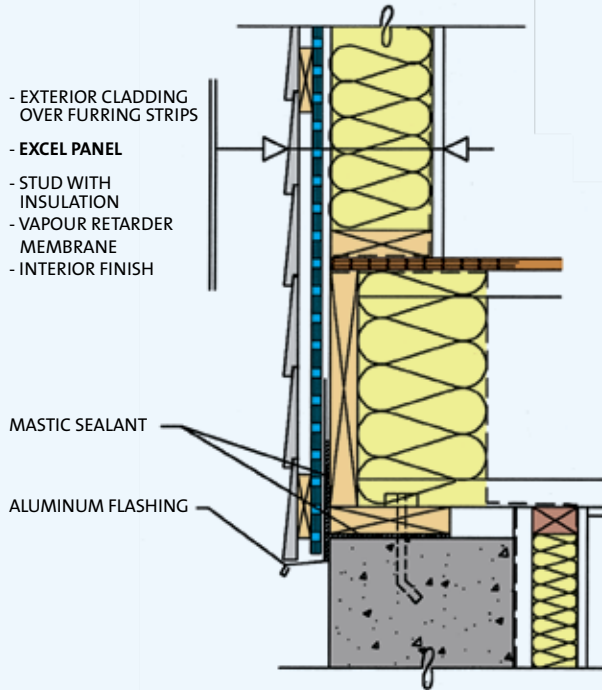
6) Do not cover sheathing until the installation has been inspected and approved by the architect/consultant.

7) Sheathing should be covered within 60 days* of installation to protect it from the elements and UV rays. Make sure sheathing is dry before applying other finishes.

*As per NRC-CNRC conforming installation requirements.

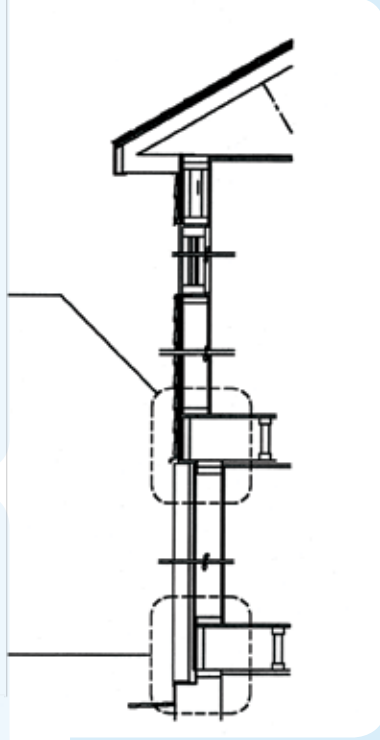


DETAIL 6 LIGHTWEIGHT CLADDING
MASONRY CLADDING INTERFACE



DETAIL 7 FOUNDATION WALL

NOTE 1: SAME PLAN FOR A CANTILEVER



INSTALLATION OF FLASHING MEMBRANE

1) Install flashing membrane underneath the first row of any masonry wall at foundation walls, on free lintels, underneath bases harbouring weep holes, below projected bases and any other areas as per the specifications outlined in the manufacturer's detailed drawings.

2) Install flashing membrane so it intersects the exterior cladding from the outer side of the wall and by raising the inner part at least 152.4 mm (6 in.) up the back wall.

3) Overlap flashing joints by 152.4 mm (6 in.) and use a manufacturer recommended adhesive to seal the joints.



BUILDING PRODUCTS OF CANADA CORP.



MADE HERE PREFERRED EVERYWHERE

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