Vapour Barrier and Insulation
Installations and Applications in Housing Inspections

Frequently Asked Questions

The following are questions commonly fielded by The City of Winnipeg Housing Inspections Branch regarding air and vapour barrier installations in Housing applications. Manitoba Building Code (MBC) references are noted, where applicable.

1. At what inspection stage is the insulation and vapour barrier inspected?

   A: All insulated wall and ceiling cavities require two inspections before they can be closed up with drywall or another finishing product: first is the "rough-in" inspection, then the "preboard" inspection. Insulation and vapour barrier are inspected during the "preboard" inspection. The "rough-in" inspection must be passed before a "preboard" can be scheduled. See Questions 15, 16 & 17 for additional information.

2. Does the exterior of the structure have to be wrapped with a house wrap product such as Tyvek® prior to installation of insulation and vapour barrier?

   A: Yes. If not wrapped with an approved house wrap product, the 2 mm gap between sheathing panels [required via MBC 9.23.17.5.(1)] will allow the penetration of rain and snow, causing issues with the installed and sealed insulation. Flashings above windows and doors are also required to be installed.

3. Do the poly boxes for electrical equipment have to be supported on all 4 sides?

   A: No. However, at time of inspection, the seal between the poly box and vapour barrier must be intact or it will be an inspection defect. This also applies to boxes located in the ceiling. If the seal is not intact at inspection, it will be defected. Electricians may have to install support on 2 sides or use a PVC gasketted box to ensure an adequate seal. Poly boxes for pot lights will require support on 4 sides.

4. Are IC (Insulation Contact) rated pot lights or low-profile LED lights acceptable without a vapour boot?

   A: No. IC rated pot lights have an approximately 5% air leakage rate; they must be completely sealed with a vapour boot rated for 90-degrees C. All lighting, including LED type, is required to be installed in a vapour boot with the wire penetration sealed.

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5. Is a construction tape used for sealing house wrap air barriers such as red Tuck® Tape, acceptable to use to seal vapour barrier?

   A: No, construction sealing tape is rated specific to each application and manufacturer. Only sealing tape rated for application to vapour barrier as per CCMC 14018-R is acceptable. The CCMC number is written on the tape (e.g.: dark blue Tuck® Tape w/ white print).

6. Is acoustical sealant or low expansion spray foam acceptable for sealing penetrations in vapour barrier boxes and penetrations where interior walls intersect with exterior walls and ceilings?

   A: Yes. Either of these products is acceptable for this application.

7. Is canned low expansive spray foam acceptable for application around door and window jambs?

   A: Yes. Canned low expanding foam is acceptable specifically for gaps between the framing and window/door jambs. Insulation (foam, batt, closed cell backer rod or a combination of these) shall be applied to the full width and length of space [MBC 9.25.2.3.(2)].

8. Do windows, doors and skylights need to be sealed to air and vapour barriers?

   A: Yes. Approved sealing tape rated for application to vapour barrier as per CCMC 14018-R, acoustical sealant or low expanding foam are acceptable. Windows, doors and skylights shall be sealed to air barriers and vapour barriers [MBC 9.7.6.1.(3)].

9. Are there any special requirements for sealing an attic access hatch in the ceiling?

   A: Yes. Access hatches installed through the ceiling shall be weather stripped around their perimeter to prevent air leakage and must be insulated with a minimum R50. The vapour barrier in contact with the access hatch must be sealed and fully backed with framing on all four sides.

10. What if it is too cold to apply spray foam (SPF) insulation?

    A: During the period between November 1 and April 30, climatic conditions in unheated buildings are not conducive to the installation of spray foam insulation. Where an inspection is required during this time period, any yet-to-be-insulated wall or joist cavities must be clearly marked as locations for spray foam insulation to be applied when climatic conditions improve. Generally, a red marker on the poly with an arrow to the space is adequate.

11. What is required for Job Site Labelling for spray foam (SPF)?
    A: In all cases where spray foam has been applied, (other than low expansion foam as around windows and doors), proper signage must be posted and legible on all entrance doors to the dwelling and must remain in place and legible until final inspection. Signage must include: the property address, applicator's company name, date of SPF application and the start time and end time of spraying.

A Job Site Label must also be installed in a prominent permanent location as per CAN/ULC-S705.2 by the licensed installer when the installation has been completed. Only a licensed installer is certified to apply SPF to the CAN/ULC-S705.2 requirements.

12. Is vapour barrier required to cover spray foam insulation?

A: Spray foam installed to meet CAN/ULC-S705.2 requirements will have adequate vapour barrier properties. Low density, open or closed cell, ½ pound polyurethane spray foam kits installed by a non-certified installer (e.g.: Froth-Pak™) do not meet this Standard and will require additional vapour barrier.

13. Is an additional inspection required for an attached garage in cab-over style homes?

A: Not generally however, insulation and vapour barrier details must be provided on submitted plans approved by the City. The City may request an additional inspection of this cab-over as it is not always practical for it to be ready at the first preboard inspection. This will be determined on a project by project basis.

14. Is white polyethylene vapour barrier acceptable?

A: White vapour barrier is accepted for unfinished/undeveloped basements in new home builds only. All other areas must use clear poly. The inspector must be able to visibly see the insulation and the seal of all vapour barrier connections.

15. Does the basement have to be sealed as per MBC Section 9.36?

A: Unfinished/Undeveloped Basement:
Acknowledging that in new home construction, the home's HVAC system can assist in the removal of moisture as concrete cures and the stabilization of the moisture content of framing materials, home builders constructing a new build but NOT finishing/developing the basement are permitted some relaxations for sealing the vapour barrier but must meet the following minimum requirements:

- The insulation and vapour barrier itself must meet the criteria in the MBC as to its installation and qualities.

- Vapour barrier must be sealed at joist cavities and all other joints and penetrations to below any basement windows, including the entire perimeter of any window installations. All electrical boxes (e.g.: sump, washer, dryer, etc.) and wire penetrations must also be sealed.

- The remaining vapour barrier shall be installed and stapled, but may be left unsealed until the basement is developed. This will allow the vapour barrier to be lifted without damage to facilitate drying of construction materials and installation of additional electrical or framing during basement development.

Finished/Developed Basement:

- Basement is finished/developed as part of the original building permit:
  If the builder of the new home is developing the basement at the time of new construction, the insulation and vapour barrier must be installed and inspected to the requirements of MBC Section 9.36, similar to other levels of the home.

- Basement is finished/developed apart from the original building permit:
  Homeowners may opt to develop an unfinished basement at a later date, hire another contractor to do the work, or do the work themselves. It is the responsibility of the permit applicant of the basement development to reinstall any insulation and to seal the lower part of the vapour barrier as per MBC Section 9.36. If the poly is the white builder-installed type, it can remain. An insulation and vapour barrier inspection will be required for this lower level development.

16. My builder installed insulation and vapour barrier in my basement when the home was constructed and it was inspected at that time. Why do I need another insulation and vapour barrier inspection when I develop the basement?

    A: The home builder was not required to completely seal the vapour barrier at the time of new construction. This allowed it to be lifted without damage for the future installation of electrical or framing components during basement development. It also facilitated drying of the construction materials. During basement development, care must be taken to not compress the insulation or damage the vapour barrier. Lifting the vapour barrier, not cutting it, is recommended. Any cuts in the vapour barrier will need to be supported by wood framing. To avoid having to add additional framing for support, if cutting of the vapour barrier is necessary, do so on wood studs or plates, not between them.

17. Does the air/vapour barrier inspection include inspection of resilient channel and insulation for sound rating in a suite separation when applicable?

    A: Yes. If the project requires an STC rating (sound barrier for secondary suites, multifamily), any required acoustical insulation and resilient channel should be ready for inspection at the same time as the thermal insulation and vapour barrier inspection. If the exterior thermal insulation is not within the scope of a project (i.e.: it was completed as part of a previous development), an additional inspection will be required for the resilient channel and sound insulation in a project with a suite separation.