

Do I need a fire separation between our home and the attached garage?

Under the Alberta Building Code 2006 (ABC), where a storage garage serves only the dwelling unit to which it is attached or in which it is built, it shall be considered as part of that dwelling unit and a fire separation **need not** be provided between the garage and the dwelling unit. Although a fire separation is not required between the garage and the dwelling unit, the Alberta Building Code does require that an air barrier system be installed to provide an effective barrier to gas and exhaust fumes. The gas-tight barrier is intended to provide protection against the entry of carbon monoxide and gasoline fumes into the dwelling unit.

- Where a garage is open to the adjacent attic space above the dwelling unit it serves, a gas-tight barrier in the ceiling of the dwelling unit will also provide protection.
- Unit masonry walls forming the separation between a dwelling unit and an adjacent garage should be provided with two coats of sealer or plaster, or covered with gypsum wallboard on the side of the wall exposed to the garage. All joints must be sealed to ensure continuity of the barrier.
- Building assemblies incorporating an air barrier system will perform adequately with respect to gas tightness, provided all joints in the airtight material are sealed and reasonable care is exercised where the wall or ceiling is pierced by building services.

The Alberta Building Code 2006 states the following:

9.25.3.3. Continuity of the Air Barrier System

1) Where the *air barrier system* consists of an air-impermeable panel-type material, all joints shall be sealed to prevent air leakage.

2) Where the *air barrier system* consists of flexible sheet material, all joints shall be sealed, or lapped not less than 100 mm and clamped, such as between framing members, furring or blocking and rigid panels.

3) Where an interior wall meets an exterior wall, ceiling, floor or roof required to be provided with air barrier protection, the *air barrier system* shall extend across the intersection.

4) Where an interior wall projects through a ceiling or extends to become an exterior wall, spaces in the wall shall be blocked to provide continuity across those spaces with the *air barrier system* in the abutting walls or ceiling.

5) Where an interior floor projects through an exterior wall or extends to become an exterior floor, continuity of the *air barrier system* shall be maintained from the abutting walls across the floor assembly.

6) Penetrations of the *air barrier system*, such as those created by the installation of doors, windows, electrical wiring, electrical boxes, piping or ductwork, shall be sealed to maintain the integrity of the *air barrier system* over the entire surface.

7) Access hatches installed through assemblies constructed with an *air barrier system* shall be weather-stripped around their perimeters to prevent air leakage.

8) Clearances between *chimneys* or *gas vents* and the surrounding construction that would permit air leakage from within the *building* into a wall or *attic* or *roof space* shall be sealed by *noncombustible* material to prevent such leakage.

9.25.3.1. Required Barrier to Air Leakage

1) Thermally insulated wall, ceiling and floor assemblies shall be constructed so as to include an *air barrier system* that will provide a continuous barrier to air leakage

- a) from the interior of the *building* into wall, floor, *attic or roof spaces*, sufficient to prevent excessive moisture condensation in such spaces during the winter, and
- b) from the exterior inward sufficient to prevent moisture condensation on the room side during winter and to ensure comfortable conditions for the occupants. (See Appendix A.)

9.25.3.3. Air Barrier System Properties

1) *Air barrier systems* shall possess the characteristics necessary to provide an effective barrier to air infiltration and exfiltration under differential air pressure due to stack effect, mechanical systems or wind.

2) Polyethylene sheets used to provide airtightness in the *air barrier system* shall conform to CAN/CGSB-51.34-M, "Vapour Barrier, Polyethylene Sheet for Use in Building Construction."

A-9.25.3.2. Air System Properties. Materials that have been tested and are considered to have low air permeance include:

- 2 mm smooth surface roofing membrane
- 2.7 mm modified bituminous torch-on membranes
- 1.3 mm modified bituminous self-adhesive membranes
- 12.7 mm gypsum board
- 12.7 mm cement board
- 8 mm plywood
- 12.7 mm particle board
- 11 mm waferboard
- 3.2 mm tempered hardboard
- 38 mm extruded polystyrene
- 25.4 mm foil back urethane insulation
- 24 mm phenolic insulation board
- aluminum foil
- polyethylene sheet
- reinforced non-perforated polyolefin

Note: Doors between an attached or built-in garage and a *dwelling unit* shall be tight fitting and weather-stripped to provide an effective barrier against the passage of gas and exhaust fumes and shall be fitted with a self-closing device. The doorway between an attached or built-in garage and a *dwelling unit* shall not be located in a room intended for sleeping.

Always contact the local authority having jurisdiction prior to any construction activity and ensure your project complies with Alberta safety codes and local bylaws. Local authority and permit information may be accessed at: [Permit Information](#)

If you require further information please contact Safety Services at:

Telephone: 1-866-421-6929
Email: safety.services@gov.ab.ca

www.municipalaffairs.alberta.ca