

AIR BARRIER AND RECESSED LIGHT FIXTURES

ONTARIO BUILDING CODE

9.25.3.2. Air Barrier System Properties

- (1) Sheet and panel type materials intended to provide the principal resistance to air leakage shall have an air leakage characteristic not greater than $0.02 \text{ L}/(\text{s}\cdot\text{m}^2)$ measured at a air pressure differential of 75 Pa.
- (2) Where polyethylene sheet is used to provide the air-tightness in the air barrier system, it shall conform to CAN/CGSB-51.34-M, "Vapour Barrier, Polyethylene Sheet for use in Building Construction".

9.25.3.3. Continuity of the Air Barrier System

- (9) Penetration of air barrier system, such as those created by the installation of electrical wiring, electrical boxes, piping or ductwork, shall be sealed with compatible material such as tape or caulking to maintain the integrity of the air barrier system over the entire surface.

OBJECTIVE

Penetrations caused by recessed light fixtures, commonly referred to as 'pot lights', of the attic air/vapour barrier in a dwelling represents a potential source of air leakage. Air leakage into a roof attic or air space above an insulated ceiling can result in serious condensation problems.

In recent years, manufactures have developed a variety of specialty products designed to make air sealing around pot lights easier and more effective.

A rigid polyethylene surround is one product that is widely available and can be installed following these steps;

- Pot lights that are approved for use in insulated ceilings are inserted into the air/vapour barrier surrounds.
- The pot light is fastened to the framing of the building.
- The main attic air/vapour barrier is sealed to the flange on the surround.

The melting point of the polyethylene surround must be compatible with the type of pot light being used. The illustration below depicts a typical installation.

