



Piping Protection From Frost

The Building Standards Department issues Builder Tips as part of our customer service program. They are designed to provide an improved understanding of the Building Code and to reduce the costs associated with correcting infractions. Please contact your area building inspector for further information or call the Building Standards Department at 905.475.4848 extension 2189

7.3.5.3. Protection against Freezing

(1) Where piping may be exposed to freezing conditions, it shall be protected from the effects of freezing. (See Note A-7.3.5.3.(1))

9.25.2.1. Required Insulation

(1) All walls, ceilings and floors separating heated space from unheated space, the exterior air or the exterior soil shall be provided with sufficient thermal insulation to prevent moisture condensation on their room side during the winter and to ensure comfortable conditions for the occupants. (See Note A-9.1.1.1.(1))

9.25.3.1. Required Barrier to Air Leakage

(1) Wall, ceiling and floor assemblies that separate conditioned spaces from unconditioned space or from the ground 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 heating season, and

(b) from the exterior or the ground inward sufficient to

(i) prevent moisture condensation on the room side during winter,

(ii) ensure comfortable conditions for the occupants, and

(iii) minimize the ingress of soil gas

(See Note A-9.25.3.1.(1))

(2) The continuity of the air barrier system shall extend throughout the basement.



9.25.4.3. Installation of Vapour Barriers

(1) Products installed to function as the vapour barrier shall protect the warm side of wall, ceiling and floor assemblies.

(2) Where different products are used for the vapour barrier and the insulation, the vapour barrier shall be installed sufficiently close to the warm side of the insulation to prevent condensation at design conditions. (See Notes A-9.25.5.1.(1) and A-9.25.5.1.(1))

(3) Where the same product is used for the vapour barrier and the insulation, the product shall be installed sufficiently close to the warm side of the assembly to prevent condensation at the design conditions. (See Notes A-9.25.4.3.(2), A-9.25.5.1.(1) and A-9.25.5.2.)

OBJECTIVE

To avoid freezing of plumbing pipes and the resulting water damage that can occur, water supply, soil or waste plumbing pipes cannot be located in the following locations;

- The exterior of the building
- In the exterior wall that's not insulated
- Water supply piping located above an unheated space such as an attached garage, unless the space between the garage ceiling and the underside of the floor is heated.
- Adjacent to or near roof spaces

Water piping installed over garages, protected by only insulation, has proven to be an unreliable method of preventing freezing of water pipes. The illustration is an example showing the protection of water piping against frost damage when located near a roof space.

