

BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing
AIBC, EGBC, BOABC

File No: 24-0080

INTERPRETATION

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Interpretation Date: April 15, 2025

Building Code Edition: BC Building Code 2024, Book I: General

Subject: Protection of Insulation in Crawl Spaces

Keywords: Crawl Space, Insulation, Mechanical Damage

Building Code Reference(s): 9.10.8.9., 9.25.2.3.(7).

Question(s):

When a crawl space is used for storage or for mechanical equipment, is the insulation required to be protected from mechanical damage?

Answers: Yes – Protection with durable materials is generally required.

The provisions of Sentence 9.25.2.3.(7) specifically require insulation to be protected in areas “where it may be subject to mechanical damage”. In the context of Subsection 9.25.2., which only addresses thermal performance, we interpret this to include locations where there is a reasonable probability that damage may occur due to its intended use. This may lead to the insulation being cut, pierced, abraded, torn, or otherwise degraded in a manner which could impact its ability to provide the level of thermal performance intended for the building.

The Code lists examples of relatively durable materials such as gypsum board, plywood, etc. which could be used to protect the insulation from contact. This is not an exhaustive list, and other suitably durable materials may also be considered.

Where storage is provided, materials and equipment are likely to be moved or repeatedly accessed, which could over time, lead to damage to the insulation if it is not protected. Likewise, where fixed equipment or appliances are installed, such equipment typically requires regular servicing, replacement of parts and consumables, or inspection, during which the insulation could be damaged. An exception to this might be where equipment is designed and installed in such a way that it may be accessed, serviced, and inspected without entry into the crawl space, and without risk of damage to any adjoining insulation.



Patrick Shek, P.Eng., CP, FEC, Committee Chair

The views expressed are the consensus of the joint committee with members representing AIBC, EGBC and BOABC, which form the BC Building Code Interpretation Committee. The Building and Safety Standards Branch, Province of BC and the City of Vancouver participate in the committee's proceedings with respect to interpretations of the BC Building Code. The purpose of the committee is to encourage uniform province wide interpretation of the BC Building Code. These views should not be considered as the official interpretation of legislated requirements based on the BC Building Code, as final responsibility for an interpretation rests with the local *Authority Having Jurisdiction*. The views of the joint committee should not be construed as legal advice.

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Note that crawl spaces are included in the definition of *Horizontal service space*, which are generally intended to be inaccessible, but which may contain building service facilities for pipes, ducts, and wiring which do not require regular service or inspection. Areas including storage, appliances or other equipment (such as mechanical service equipment), are generally not appropriate for crawl spaces, noting exceptions in 9.10.8.9. for crawl spaces exceeding 1.8 m in height, used for an occupancy, or used as a plenum, which are considered as a *basement* for the purposes of *fire-resistance*. The increase in height promotes occupancy and frequent access of the crawl space; hence, insulation should be protected from mechanical damage as per Sentence 9.25.2.3.(7).

Also note that additional requirements with respect to fire protection of foamed plastic insulation will apply as per Sentence 9.10.17.10.(1).



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