

Jan 16, 2024 Bulletin No. 24-01

Protection of Foamed Plastics

BC Building Code minimum requirements for Foamed plastics

Purpose

To inform building contractors and designers on the minimum requirements for the protection of foamed plastics when part of an exposed wall or ceiling assembly in a group C occupancy. The BCBC section 9.10.17.10. States foamed plastics that form part of a wall or ceiling assembly shall be protected from adjacent space in the building, other than adjacent concealed spaces within attic or roof spaces, crawl spaces, wall assemblies and ceiling assemblies. Information provided is relevant to both the 2018 and 2024 BCBC.

Acceptable coverings for foamed plastics as per BCBC 9.29.4. to 9.29.9. include plaster, drywall, plywood, hardboard, insulating fiberboard, and particle or OSB board which is assumed to be mechanically fastened to the supporting assembly independent of the insulation or; by any thermal barrier that meets the requirements of Sentence 3.1.5.15.(2).

References and Background

Minimum requirements for protection of foamed plastics BCBC 9.10.17.10. - Protection of Foamed Plastics

- 1) Except as provided in Sentences (2) and (3), foamed plastics that form part of a wall or ceiling assembly shall be protected from adjacent space in the building, other than adjacent concealed spaces within attic or roof spaces, crawl spaces, wall assemblies and ceiling assemblies.
- 2) – sentence applies to walk-in coolers
- 3) – sentence applies to exterior doors



Mech. Rm - Unprotected foam plastics in joist spaces

Acceptable coverings for foamed plastics are as per sections 9.29.4. to 9.29.9 or, by any thermal barrier that meets the requirements of Sentence 3.1.5.15. (2). (See Note A-3.1.4.2. (1)(c).)

- 9.29.4. Plastering
- 9.29.5. Gypsum Board Finish (Taped Joints)
- 9.29.6. Plywood Finish
- 9.29.7. Hardboard Finish
- 9.29.8. Insulating Fibreboard Finish
- 9.29.9. Particleboard, OSB or Waferboard Finish

Alternative Method to Provide Protection

The following Alternative methods can be used to provide required foamed plastic protection. Installation method and detail are to be indicated on issued permit drawings and confirmed prior to installation.

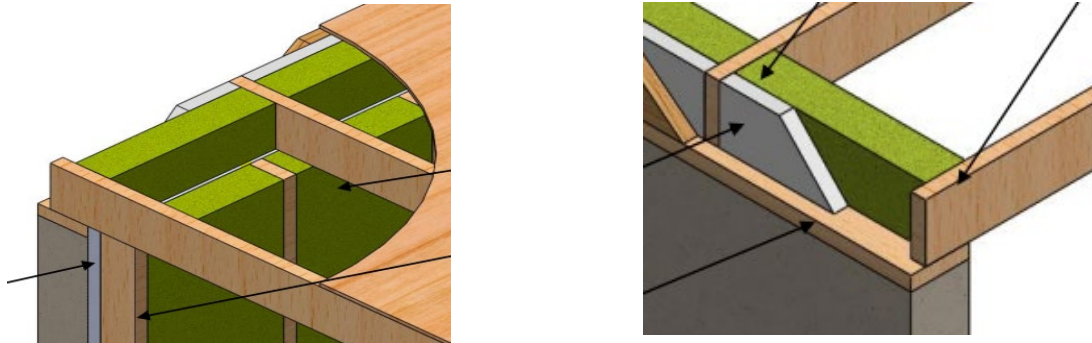
Please note: Building Bulletins are prepared to provide convenient information for customers, and should not be considered a replacement for reviewing the bylaw or associated legal documents. If there is any contradiction between this guide and relevant municipal bylaws and/or applicable codes, please refer to the bylaws and/or codes for legal authority.

Insulation Thermal Barrier

The proposed use of an insulation barrier to follow certified Canadian testing approvals and installation details.

QAI Design B1067-1e – ROXUL, Inc. – ROCKWOOL COMFORTBATT/COMFORTBOARD™ 80 CAN/ULC-S124 – Classification A & B protective covering for foamed insulation.

<https://www.rockwool.com/siteassets/o2-rockwool/documentation/technical-bulletins/residential/thermal-barrier-technical-bulletin.pdf>



QAI – Mineral wool installation examples - Unprotected foam plastics in joist

Coatings - Intumescent Paints Barrier

The proposed use of intumescent paints will require an **Alternative Solution Application** and verification of certified Installer prior to installing.

List product for foamed plastics – CCMC 14036-R - International Fireproof Technology Inc.

<https://nrc.canada.ca/en/certifications-evaluations-standards/canadian-construction-materials-centre/ccmc-publications/pdf.html?type=cert&id=589>

City of Penticton Alternative Solutions Application form

See <http://www.penticton.ca/permits/applications>

Implementation

Common areas where foamed plastics or spray applied foamed plastics can be found, include unprotected joist box ends in mechanical rooms and unfinished basements. These areas can be hard to protect using the coverings listed out of BCBC 9.29.4. – 9.29.9., as mechanically fastening can be a challenge.

A thermal barrier may be a better approach for these areas with either an approved mineral wool pressure fit and supported by framing, and or, an intumescent coating over the foamed plastic and stud cavity as an alternative acceptable solution. The illustrations below show these acceptable applications. It's best to work with your Building Official on an acceptable installation in more challenging areas.

Have questions? We're here to help. Please contact the Building Department at 250 - 490-2571 or email buildinginfo@penticton.ca.