

I am building a house using an insulated concrete foundation system (ICF). Are there any code requirements I need to be aware of regarding the use of foamed plastics in my home?

Protection of Foamed Plastics

Foamed plastics include polyisocyanurate foam, polystyrene foam, polyurethane foam and polyvinyl chloride foam. They are commonly used in ICF foundation systems. The Alberta Building Code (ABC) requires that foamed plastics used as part of a wall or ceiling assembly be thermally protected.

Note the following Article from the ABC 2006:

9.10.17.10. Protection of Foamed Plastics

- 1)** Except as provided in Sentence (2), foamed plastics which form part of a wall or ceiling assembly in *combustible construction* shall be protected from adjacent space in the *building*, other than adjacent concealed spaces within *attic or roof spaces*, crawl spaces, and wall assemblies, by
 - a) one of the interior finishes described in Subsections 9.29.4. to 9.29.9.,
 - b) sheet metal mechanically fastened to the supporting assembly independent of the insulation and having a thickness of not less than 0.38 mm and a melting point not below 650°C, provided the *building* does not contain a Group C *major occupancy*, or
 - c) any *thermal barrier* that meets the requirements of Clause 3.1.5.12.(2)(e).
- 2)** Thermosetting *foamed plastic* insulation having a *flame-spread rating* of not more than 200 is permitted to be used in factory-assembled doors in *storage garages* serving single *dwelling units* provided that
 - a) the insulation is covered on the interior with a metallic foil,
 - b) the assembly has a *flame-spread rating* of not more than 200, and
 - c) the assembly incorporates no air spaces.

A crawlspace is a non occupied space below the main floor that is not used as a service room to house mechanical equipment. Also, a crawlspace cannot exceed 1.8 m in height nor be used as a plenum.

Interior finishes include but are not limited to lathe and plaster, drywall, plywood, particleboard and oriented strand board (osb). Sheet metal is not an acceptable thermal barrier for a house since a house is classified as a Group C occupancy.

Note: The flame spread rating of interior finishes shall not exceed 150.

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:

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