

2018 British Columbia Building Code Public Review of Proposed Changes



PROPOSED CHANGE: Asbestos

CHANGE NUMBER: 2018-BCBC-03-Asbestos

CODE REFERENCE: 2015 National Building Code – Division B – Various Articles

DESCRIPTION OF THE PROPOSED AMENDMENT:

It is proposed to remove all direct permissions in the British Columbia Building Code (BCBC) to asbestos containing products.

PROBLEM/BACKGROUND:

The BCBC is based substantially on the model National Building Code of Canada (NBC). The NBC is updated about every five years and British Columbia adopts most of the NBC requirements into the next edition of the BCBC. The 2018 BCBC will be based on the 2015 NBC with some changes specific to British Columbia.

The proposed changes show variations from the model 2015 NBC. Though the 2012 BCBC contains some other references to asbestos containing products, some of these have been deleted from the 2015 NBC. For instance, the standard CAN/CGSB-34.22-94, "Asbestos-Cement Drain Pipe," is no longer referenced in Table 5.9.1.1. (formerly Table 5.10.1.1.) or Sentence 9.14.3.1.(1) of the 2015 NBC. Hence, this deletion is not identified. Another instance is that Article 9.10.22.2. of the 2015 NBC no longer lists asbestos millboard as acceptable protection above cooktops and that omission is not shown below.

The code language provided is the proposed final code language that will appear in the 2018 BCBC. Comments submitted should focus on the changes noted. Changes from the 2012 BCBC to the 2015 NBC are not identified.

2018 PROPOSED BRITISH COLUMBIA CODE LANGUAGE: (~~Deleted text~~ / Added text):

3.6.5.1. Duct Materials

1) Except as permitted by Sentences (2) to (5) and Article 3.6.4.3., all ducts, duct connectors, associated fittings and *plenums* used in air duct systems shall be constructed of steel, aluminum alloy, copper, clay, ~~asbestos-cement~~ or other *noncombustible* material.

5.9.1.1. Compliance with Applicable Standards¹

1) Except as provided in Sentence (2) and elsewhere in this Part, materials and components, and their installation, shall conform to the requirements of the applicable standards in Table 5.9.1.1. where those materials or components are

- a) incorporated into environmental separators or assemblies exposed to the exterior, and
- b) installed to fulfill the requirements of this Part.

(See Note A-5.9.1.1.(1).)

¹ Article was numbered 5.10.1.1. in the 2012 BCBC.

Table 5.9.1.1.		
Standards Applicable to Environmental Separators and Assemblies Exposed to the Exterior		
Forming Part of Sentence 5.9.1.1.(1)		
Issuing Agency	Document Number	Title of Document
ASTM	D 3019 ⁽⁴⁾	“Lap Cement Used with Asphalt Roll Roofing, Non-Fibered, Asbestos-Fibered, and Non-Asbestos-Fibered”
ASTM	D 4479/D 4479M	“Asphalt Roof Coatings – Asbestos-Free”

Notes to Table 5.9.1.1.:

⁽⁴⁾ For the purpose of compliance with Part 5, ASTM D 3019 shall only apply to the non-fibered and non-asbestos-fibered types of asphalt roll roofing.

6.2.1.7. Asbestos²

1) Asbestos shall not be used in air distribution systems or equipment ~~in a form or in a location where asbestos fibres could enter the air supply or return systems.~~

9.13.3.2. Waterproofing Materials

1) Materials installed to provide required waterproofing shall be

- a) compatible with adjoining materials, and
- b) resistant to mechanisms of deterioration that may reasonably be expected, given the nature, function and exposure of the materials.

2) Materials used for exterior waterproofing shall conform to

- a) ASTM D 1227, “Emulsified Asphalt Used as a Protective Coating for Roofing,” in which case, they shall be installed in accordance with Sentence 9.13.3.3.(3),
- b) ASTM D 3019, “Lap Cement Used with Asphalt Roll Roofing, Non-Fibered, Asbestos-Fibered, and Non-Asbestos-Fibered,” except that ASTM D 3019 shall only apply to the non-fibered and non-asbestos-fibered types of asphalt roll roofing.
- c) ASTM D 4479/D 4479M, “Asphalt Roof Coatings – Asbestos-Free,” in which case, they shall be installed in accordance with Sentence 9.13.3.3.(3) and with reinforcing material,
- d) ASTM D 4637/D 4637M, “EPDM Sheet Used In Single-Ply Roof Membrane,”
- e) ASTM D 4811/D 4811M, “Nonvulcanized (Uncured) Rubber Sheet Used as Roof Flashing,”
- f) ASTM D 6878/D 6878M, “Thermoplastic Polyolefin Based Sheet Roofing,”
- g) CGSB 37-GP-9Ma, “Primer, Asphalt, Unfilled, for Asphalt Roofing, Dampproofing and Waterproofing,” where a primer is required,
- h) CAN/CGSB-37.50-M, “Hot-Applied, Rubberized Asphalt for Roofing and Waterproofing,”

² Article 6.2.1.7. in the NBC 2015 appears as Article 6.2.1.10. in the 2012 BC Building Code.

- i) CAN/CGSB-37.54, "Polyvinyl Chloride Roofing and Waterproofing Membrane,"
- j) CGSB 37-GP-56M, "Membrane, Modified, Bituminous, Prefabricated, and Reinforced for Roofing,"
- k) CAN/CGSB-37.58-M, "Membrane, Elastomeric, Cold-Applied Liquid, for Non-Exposed Use in Roofing and Waterproofing,"
- l) CAN/CSA-A123.2, "Asphalt-Coated Roofing Sheets,"
- m) CAN/CSA-A123.4, "Asphalt for Constructing Built-Up Roof Coverings and Waterproofing Systems," in which case, they shall be installed with reinforcing material, or
- n) CSA A123.17, "Asphalt Glass Felt Used in Roofing and Waterproofing."

9.25.2.3. Installation of Thermal Insulation

- 1) Insulation shall be installed so that there is a reasonably uniform insulating value over the entire face of the insulated area.
- 2) Insulation shall be applied to the full width and length of the space between furring or framing.
- 3) Except where the insulation provides the principal resistance to air leakage, thermal insulation shall be installed so that at least one face is in full and continuous contact with an element with low air permeance. (See Note A-9.25.2.3.(3).)
- 4) Insulation on the interior of *foundation* walls enclosing a crawl space shall be applied so that there is not less than 50 mm clearance above the crawl space floor, if the insulation is of a type that may be damaged by water.
- 5) Insulation around concrete slabs-on-ground shall be located so that heat from the *building* is not restricted from reaching the ground beneath the perimeter, where exterior walls are not supported by footings extending below frost level.
- 6) Where insulation is exposed to the weather and subject to mechanical damage, it shall be protected with not less than

- a) ~~6 mm asbestos cement board,~~
- a) ~~b)~~ 6 mm preservative-treated plywood, or
- b) ~~e)~~ 12 mm cement parging on wire lath applied to the exposed face and edge.

9.26.3.1. Slope

- 1) Except as provided in Sentences (2) and (3), the slopes on which roof coverings may be applied shall conform to Table 9.26.3.1.

Table 9.26.3.1. Roofing Types and Slope Limits Forming Part of Sentence 9.26.3.1.(1)		
Type of Roofing	Minimum Slope	Maximum Slope
Asbestos-Cement Corrugated Sheets	1 in 4	no limit

9.27.5.1. Attachment

- 1) Except as permitted by Sentences (2) to (6), cladding shall be fastened to the framing members or furring members, or to blocking between the framing members.
- 2) Vertical lumber and stucco lath or reinforcing are permitted to be attached to sheathing only where the sheathing consists of not less than
 - a) 14.3 mm lumber,
 - b) 12.5 mm plywood, or
 - c) 12.5 mm OSB or waferboard.
- 3) Vertically applied metal siding and wood shingles and shakes are permitted to be attached to the sheathing only where the sheathing consists of not less than
 - a) 14.3 mm lumber,
 - b) 7.5 mm plywood, or
 - c) 7.5 mm OSB or waferboard.
- 4) Where wood shingles or shakes are applied to sheathing which is not suitable for attaching the shingles or shakes, the shingles or shakes are permitted to be attached to a wood lath not less than 38 mm by 9.5 mm thick securely nailed to the framing and applied as described in Article 9.27.7.5.
- ~~5) Where asbestos-cement shingles are applied to sheathing that is not suitable for attaching the shingles, the shingles are permitted to be fastened to a wood lath not less than 89 mm by 9.5 mm thick securely nailed to the framing.~~
- ~~6) Lath referred to in Sentence (5) shall be applied so that it overlaps the preceding shingle course by not less than 20 mm.~~

9.30.5.1. Materials

- 1) Resilient flooring used on concrete slabs supported on ground shall consist of asphalt, rubber, ~~vinyl-asbestos~~, unbacked vinyl or vinyl with an inorganic type backing.

9.33.4.8. Asbestos

- 1) Asbestos shall not be used in air distribution systems or equipment ~~in a form or in a location where asbestos fibres could enter the air supply or return systems.~~

9.33.6.2. Materials in Air Duct Systems

- 1) Except as provided in Sentences (2) to (6) and in Article 3.6.4.3., all ducts, duct connectors, associated fittings and *plenums* used in air duct systems shall be constructed of steel, aluminum alloy, copper, clay, ~~asbestos-cement~~ or similar *noncombustible* material.

Appendix D - FIRE PERFORMANCE RATING

D-4.3. MATERIALS CLASSIFIED AS NONCOMBUSTIBLE

D-4.3.1. Typical Examples

Noncombustible materials include brick, ceramic tile, concrete made from Portland cement with noncombustible aggregate, ~~asbestos cement~~, plaster made from gypsum with noncombustible aggregate, metals commonly used in buildings, glass, granite, sandstone, slate, limestone and marble.

RATIONALE FOR CHANGE

The BCBC currently contains several direct references to asbestos containing materials. Due to health concerns related to asbestos containing materials, all direct permissions for these are proposed to be removed from the BCBC.

Airborne particulate asbestos from handling or disturbing asbestos-containing materials can cause adverse health effects.

JUSTIFICATION/EXPLANATION:

The proposed change does not expressly prohibit asbestos containing materials to be used, as there are some instances where asbestos containing materials could be accepted as an alternative solution to the code's prescriptive requirements. There are also cases where a product standard referenced by the code may permit the use of asbestos containing products. However, the proposed changes remove all direct references to asbestos containing products from the BCBC as acceptable solutions because of the potential risk to the health and safety of building occupants.

Sentences 9.27.5.1.(5) and (6) have been deleted entirely. Although these Sentences were formerly changed in the 2012 BCBC to refer to fibre-cement shingles, new information indicates that these requirements may not be appropriate for attachment of fibre-cement shingles.