

BC BUILDING CODE INTERPRETATION COMMITTEE

A joint committee with members representing
AIBC, EGBC, BOABC

File No: 18-0181

INTERPRETATION

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Interpretation Date:	June 14, 2021
Building Code Edition:	BC Building Code 2018
Subject:	Wired Safety Glass
Keywords:	Georgian wired glass, safety glass, impact loading
Building Code Reference(s):	3.3.1.19.(3)(b), 3.4.6.15.(1) & (3), 9.6.1.4.(1), 9.8.8.7.(1) Appendix D-2.3.15.

Question:

The Canadian General Standards Board has withdrawn the manufacturing standard for “Wired Safety Glass” (CAN/CGSB-12.11-M90) due to numerous serious injuries caused by human impact with conventional annealed wired safety glass. Furthermore, the Canadian Glass Association has recommended against the use of wired safety glass in locations subject to human impact.

1. For non-fire rated glazing assemblies, is conventional annealed wired safety glass permitted in buildings?
2. For fire rated glazing assemblies, is conventional annealed wired safety glass permitted in buildings?

Interpretation:

1. Yes (with caution)

For Part 3 Buildings

3.3.1.19.(3)(b) requires that glazing that is used in a glass door must comply with either CAN/CGSB-12.1-M90 (Tempered or Laminated Safety Glass) or CAN/CGSB-12.11-M90 (Wired Safety Glass).

3.4.6.15.(1) & (3) requires that glazing that is used in the door leaves of a manual or electrically powered revolving glass door must comply with either CAN/CGSB-12.1-M90 (Tempered or Laminated Safety Glass) or CAN/CGSB-12.11-M90 (Wired Safety Glass).

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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For Part 9 Buildings

9.6.1.4.(1) requires that glazing that is used in sliding doors, storm doors and glass sidelights that are more than 500 mm wide must comply with either CAN/CGSB-12.1-M90 (Tempered or Laminated Safety Glass) or CAN/CGSB-12.11-M90 (Wired Safety Glass).

9.8.8.7.(1) requires that glazing that is used in guards must comply with either CAN/CGSB-12.1-M90 (Tempered or Laminated Safety Glass) or CAN/CGSB-12.11-M90 (Wired Safety Glass).

The type of glazing used in other locations in a building are not regulated with respect to the glazing manufacturing standard.

Since the Canadian General Standards Board has withdrawn the manufacturing standard for "Wired Safety Glass" (CAN/CGSB-12.11-M90), the quality control of the manufacture of conventional annealed glass could be questionable.

It should be noted that the 2020 NBC has introduced a new Article 3.3.2.17. for Safety Glazing in assembly buildings which references the new standard CAN/CGSB-12.1-2017 (Safety Glazing) which includes impact resistant wired safety glass.

3.3.2.17. Safety Glazing

- 1)** Except as permitted in Sentence (3), glazing in all fixed and operable panels of doors shall conform to Class A of CAN/CGSB-12.1, "Safety Glazing."
- 2)** Except as permitted in Sentence (4), glazing in all fixed and operable panels of windows shall conform to Class A of CAN/CGSB-12.1, "Safety Glazing."
- 3)** Glazing in individual fixed or operable panels of a door need not comply with Sentence (1), where
 - a) the bottom exposed edge of the glazing is located more than 1 525 mm above the walking surface on each side of the door, or
 - b) the glazed opening in the door does not permit the passage of a sphere whose diameter is more than 75 mm.
- 4)** Glazing in individual fixed or operable panels of a window need not comply with Sentence (2), where
 - a) the bottom exposed edge of the glazing is located more than 1 525 mm above the walking surface on each side of the window, or
 - b) the glazing is located more than 915 mm away from the walking surface on each side of the window measured perpendicular to the plane of the glazing.



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Based on the recommendation of the Canadian Glass Association, it is prudent to avoid the use of annealed wired safety glass in locations subject to human impact. **It is prudent that glazing that is subject to human impact be manufactured to the new standard CAN/CGSB-12.1-2017 using impact resistant wired glass.**

2. Yes (with caution)

Appendix D-2.3.15. provides prescriptive requirements for wired glass assemblies that have a fire resistance rating of up to 1 hour. These prescriptive requirements do not mention the manufacturing standard for the wired safety glass.

The cautionary note in the answer to Question 1 also applies to fire rated glazing if it is located in areas subject to human impact.



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