

August 15, 2025

Safety Codes Services Bulletin

Penetrations by Combustible Outlet Boxes in a Fire Separation

NBC2023 (Alberta Edition) Building Code,
Sentence 9.10.9.8.(3) & 3.1.9.3. (2)

Purpose:

To inform builders, contractors, designers, engineers, and suppliers how a combustible (plastic) outlet box can be used in a fire rated assembly.

Discussion:

All combustible boxes will require a fire stop in conjunction with the installation when used in a fire separation.

Requirements:

9.10.9.8. Penetrations by Outlet Boxes or Service Equipment in Concealed Spaces

1. Except as provided in Sentences (2) to (5), outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an FT rating not less than the *fire-resistance rating* of the *fire separation*. (See Note A-9.10.9.8.(1).)
2. **Combustible outlet boxes** that penetrate a fire separation or a membrane forming part of an assembly required to have a fire-resistance rating need not conform to Sentence (1), provided
 - a. the outlet boxes are
 - i. separated from the remainder of the space within the assembly by an enclosure of not more than 0.3 m² in area made of fire block material conforming to Article 9.10.16.3. (See Note A-9.10.9.8. (3)(a)(i)), **OR**
 - ii. located in a space within the assembly that is filled with preformed fibre insulation processed from rock or slag conforming to CAN/ULC-S702.1, "Standard for Mineral Fibre Thermal Insulation for Buildings, Part 1: Material Specification," and having a mass per unit area of not less than 1.22 kg/m² of wall surface such that the exposed sides and back of the outlet box are encapsulated by the non-combustible insulation, **and**

- b. the outlet boxes do not exceed an aggregate area of 0.016m² in any individual enclosure as described in Subclause (a)(i) or any individual insulated space as described in Subclause (a)(ii).

3.1.9.3. Penetration by Outlet Boxes

(See Note A-3.1.9.3.) (See also Note A-3.1.9.2.(1).)

1. Except as provided in Sentence (3), outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a *firestop* that has an FT rating not less than the *fire-resistance rating* of the *fire separation* when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems."
2. *Combustible* outlet boxes are permitted to penetrate the membrane of an assembly required to have a *fire-resistance rating*, provided they are sealed at the penetration by a *firestop* that, when subjected to the fire test method in CAN/ULC-S115, "Standard Method of Fire Tests of Firestop Systems," has an FT rating not less than the *fire-resistance rating* for the *fire separation*.

Training:

Fire stopping training/seminars

Drawings Requirements:

Submit the proposed fire stop to be used for review prior to installation to ensure compliance.

Reference:

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Approved fire stop Putty Pack Or Rated fire box enclosure



5 SIDED ENCLOSURE
5/8" TYPE X DRYWALL ENCLOSURE
JOINTS FIRE TAPED OR SEALED WITH
APPROVED FIRE STOP SEALANT