

Building Within a Building, Walk-in Coolers, and Freezers

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Code/edition/section: 2022 Oregon Structural Specialty Code (OSSC)—Sections 2603.4

Date: Issued—March 10, 1994
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Subject: Building within a building, walk-in coolers and freezers

Question:

1. For a building of Type V-A construction, if a panelized walk-in cooler or freezer of Type V-B construction is installed inside the building as part of the manufacturing process, is the walk-in cooler or freezer required to comply with the building's type of construction?
2. If so, are there any size limitations?

Answer:

1. A walk-in cooler or freezer of panels of Type V-B construction less than 400 square feet in area, complying with Section 2603.4.1.3 that are not required to have a thermal barrier, may be installed inside a building of Type V-A construction as "process equipment," without the walk-in cooler or freezer being required to comply with higher levels of construction.
2. Walk-in coolers or freezers over 400 square feet may be of Type V-B construction if they satisfy the requirements of Section 2603.4.1.2.

Notwithstanding this interpretation, walk-in cooler or freezer compartments installed in Oregon shall be inspected, certified, and have insignias affixed as provided for prefabricated construction required in ORS 455.075 and OAR Division 674.

Code sections:

OSSC Section 2603.4

Thermal barrier. Except as provided for in Sections 2603.4.1 and 2603.9, foam plastic shall be separated from the interior of a building by an approved thermal barrier of ½ inch (12.7 mm) gypsum wallboard, heavy timber in accordance with Section 602.4 or a material that is tested in accordance with and meets the acceptance criteria of both the Temperature Transmission Fire Test and the Integrity Fire Test of National Fire Protection Association (NFPA) 275. Combustible concealed spaces shall comply with Section 718.

OSSC Section 2603.4.1.2

Cooler and freezer walls. Foam plastic installed in a maximum thickness of 10 inches in cooler and freezer walls shall:

1. Have a flame spread index of 25 or less and a smoke-developed index of not more than 450, where tested in a minimum 4-inch thickness.
2. Have flash ignition and self-ignition temperatures of not less than 600°F and 800°F, respectively.
3. Have a covering of not less than 0.032-inch aluminum or corrosion resistant steel having a base metal thickness not less than 0.0160 inch at any point.
4. Be protected by an automatic sprinkler system in accordance with Section 903.3.1.1. Where the cooler or freezer is within a building, both the cooler or freezer and that part of the building in which it is located shall be sprinklered.

OSSC Section 2603.4.1.3

Walk-in coolers. In non-sprinklered buildings, foam plastic having a thickness that does not exceed 4 inches and a maximum flame spread index of 75 is permitted in walk-in coolers or freezer units where the aggregate floor area does not exceed 400 square feet and the foam plastic is covered by a metal facing not less than 0.032-inch thick aluminum or corrosion-resistant steel having a minimum base metal thickness of 0.016 inch. A thickness of up to 10 inches is permitted where protected by a thermal barrier.

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