

RE: Imperial-Brown Foam Plastic Code Compliance

Imperial Brown, Inc. insulated panels and doors are designed and comply with specification requirements of the INTERNATIONAL BUILDING CODE, local, and state building code requirements as follows.

The 2021 IBC Section 2603, *Combustible Material in Type I and II Construction*, permits foam plastics when used in accordance with Chapter 26, “*Plastic*” of the code. Specifically, Section 2603 “*Foam Plastic Insulation*” is applicable to the polyurethane cores of Imperial Brown.

Below are excerpts from the IBC and Imperial Brown’s evidence of compliance:

2603.4. 1.2 Cooler and freezer walls. Foam plastic installed in a maximum thickness of 10 inches (254 mm) 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 (102 mm) thickness.
2. Have flash ignition and self-ignition temperatures of not less than 600°F and 800°F (316°C and 427°C), respectively.
3. Have a covering of not less than 0.032 -inch (0.8 mm) aluminum or corrosion-resistant steel having a base metal thickness not less than 0.0160 inch (0.4 mm) 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.

2603.4. 1.3 Walk-in coolers. In non-sprinklered buildings, foam plastic having a thickness that does not exceed 4 inches (102 mm) 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 (37 m²) and the foam plastic is covered by a metal facing not less than 0.032 -inch-thick (0.81 mm) aluminum or corrosion-resistant steel having a minimum base metal thickness of 0.016 inch (0.41 mm). A thickness of up to 10 inches (254 mm) is permitted where protected by a thermal barrier.



Imperial Brown uses a UL 723 tested foam core with a 20 flame spread and 250 smoke developed index, meeting code requirements. Below is the UL723 test data:

Core foam UL data (File #R5692 - up to 6" Core panels)/ ASTM-E-84

Flame Spread*	20
E-84 Smoke Developed Index	250
Minimum Self-Ignition Temperature	500C (932F)
Minimum Flash-Ignition Temperature	380C (716F)

*This numerical flame spread rating is not intended to reflect hazards presented by this or any other material under fire conditions.

Panels are max. 6" thick, metal facers are minimum .0187" thick steel or 0.032" -inch-thick aluminum facer.

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