

Non-Residential Certification Material Selection 13.104.3



Overview

2020 NGBS Section 13 provides green requirements that apply to the design, construction, addition, and alteration for the non-residential portion(s) of a mixed-use building. Mixed-use buildings that are seeking NGBS Green certification for the building’s residential portion can earn an NGBS Green conformance determination for either (1) the Core-and-Shell, or (2) for the Core-and-Shell + Fit-Out. Section 13 practices are mandatory regardless of which compliance path is selected.

Core-and-Shell refers to a process where the non-residential part of the building’s interior and the building envelope are built as the first phase of the project. The non-residential part of the building’s interior is typically completed at a later phase of the project. For **Core-and-shell compliance** (See Section 13.102.1.1 below) the exterior air barrier, insulation, air sealing, and fenestration, must be verified to the Section 13 NGBS requirements.

Often in mixed-use building construction the internal elements for the tenant fit-out occurs independent of and typically after completion of the residential portion of the building. ‘Fit-Out’ describes the process of making the non-residential interior spaces suitable for the tenant. The Fit-Out design is typically specified by the tenant and is a negotiated activity that may be completed by the developer, the landlord, or the tenant. For **Core-and-Shell + Fit-Out** compliance (AKA 13.102.1.2 Full mixed-use building compliance, see below) the non-residential spaces must be verified to all requirements of 2020 NGBS Chapter 13.

13.102 Compliance

13.102.1.1 Core and shell compliance. The exterior air barrier, insulation, air sealing, and fenestration, are verified to the requirements of this chapter at the time of certification.

13.102.1.2 Full mixed-use building compliance. Residential and non-residential spaces are verified to the requirements of this standard at the time of certification. The residential portions of the building are verified to the requirements of Chapters 5 through 10 of this Standard. The non-residential portion(s) of the building must comply with the requirements of this chapter.

Compliance Question:

Does 13.104.3.1 Material selection apply to Core-and-Shell conformance determinations?

No, the material section in 13.104.3.1 is not required for Core-and-Shell certification.

Compliance Question:

Does 13.104.3.1 Material selection apply to Core-and-Shell + Fit-Out conformance determinations?

Yes, the material section in 13.104.3.1 is required for Core-and-Shell + Fit-Out conformance.

2020 NGBS Core-and-Shell Certification

13.104.1.9 Moisture control measures

13.105.1 Building thermal envelope insulation

13.105.1.1 Insulation installation

13.105.2 Building thermal envelope fenestration

13.105.3 Building thermal envelope air sealing

13.105.3.1 Air barrier verification

In addition, if ducts are installed, **13.105.10 Duct air sealing**

The applicability of Section **13.104.3** to core-and-shell is confusing because while the main practice states it is for core-and-shell material selection compliance, it also includes a seemingly sub-practice **13.104.3.1 Material selection** which deals with material selection beyond what is normally considered for core-and-shell construction. However, this sub-practice is not modified by either “Core and shell” or “Full-fit out” so it is unclear for which compliance path it is required. As a result of the practice numbering, one might interpret that core-and-shell conformance also requires compliance with the sub-practice. However, we reject that interpretation. While the numbering is admittedly unclear, the NGBS compliance requirements are unambiguous. Core-and-shell compliance is concerned simply with “exterior air barrier, insulation, air sealing, and fenestration.” It makes more sense to interpret **13.104.3** to mean that the materials used for the exterior air barrier, insulation, air sealing, and fenestration of the non-residential portion of the building to be similar to the residential portion of the building. **13.104.3.1 Material selection** is a requirement for the full-fit out conformance decision, not core-and-shell.

Further, the phrase “must comply with the additional provisions of this section” at first reading seems to refer to **13.104.3.1 Material selection**, however, on reflection we believe that it refers to the broader Section 13 (meaning the entire chapter). This reference was intended to refer to the requirements for the building to meet the practices pertaining to exterior air barrier, insulation, air sealing, and fenestration. See language below.

We are unaware of any proposed core-and-shell construction that could comply with two sections of 13.104.3.1, let alone six that are required. It is inconceivable that given the expertise of the 2020 NGBS Consensus Committee that they would have required a practice that would render impossible any conformance decisions for the core-and-shell compliance path.

13.104.3 Core and shell material selection. The core and shell of the non-residential portion of the building must contain similar green material selections of the residential portion of the building and must comply with the additional provisions of this section.

13.104.3.1 Material selection. At least six of these sections must be met from the following:

- (1) Biobased products § 606.1
- (2) Wood-based products § 606.2
- (3) Manufacturing energy § 606.3
- (4) Resource-efficient materials § 608.1
- (5) Regional materials § 609.1
- (6) Product LCA § 610.1.2.1
- (7) Building assembly LCA § 610.1.2.2
- (8) Manufacturer's environmental management system concepts § 612.1
- (9) Sustainable products § 612.2
- (10) Salvaged materials § 603.2
- (11) Product declarations § 611.1.1 and § 611.1.2
- (12) Recycled content § 604.1

Interpretation by Home Innovation Research Labs for Green Certification

Projects seeking Core-and-Shell Certification must comply with **13.104.3 Core and shell material selection** and **not 13.104.3.1 Material selection**.

Projects seeking Core-and-Shell + Fitted-Out & Equipped certification must comply with both **13.104.3 Core and shell material selection** and **13.104.3.1 Material selection**.