

GG 192-14

202 (New), 505, 505.1, 505.2

Proponent: Craig Conner, Self, representing self (craig.conner@mac.com); Gary Klein, Affiliated International Management, LLC, representing self (gary@aim4sustainability.com)

Revise as follows:

505.1 Material Building selection material and properties-product environmental declaration. Where buildings have an area that exceeds 10,000 square feet, a minimum of 10 different permanently installed materials or products shall include an *environmental product declaration*. The *environmental product declaration* shall be based on externally verified data. The *environmental product declaration* shall be certified by an *approved agency* or third party in accordance with CAN/CSA-ISO 14025 and ISO 21930.

~~Building materials shall conform to Section 505.2.~~

Exceptions:

- ~~1. Electrical, mechanical, plumbing, security and fire detection, and alarm equipment and controls, automatic fire sprinkler systems, elevators and conveying systems shall not be required to comply with Section 505.2.~~
- ~~2. Where a whole building life cycle assessment is performed in accordance with Section 303.1, compliance with Section 505.2 shall not be required.~~

Delete without substitution:

~~**505.2 Material selection.** Not less than 55 percent of the total building materials used in the project, based on mass, volume or cost, shall comply with Section 505.2.1, 505.2.2, 505.2.3, 505.2.4 or 505.2.5. Where a material complies with more than one section, the material value shall be multiplied by the number of sections that it complies with. The value of total building material mass, volume or cost shall remain constant regardless of whether materials are tabulated in more than one section.~~

~~**505.2.1 Used materials and components.** Used materials and components shall comply with the provisions for such materials in accordance with the applicable code referenced in Section 102.4 and the applicable requirements of this code.~~

~~**505.2.2 Recycled content building materials.** Recycled content building materials shall comply with one of the following:~~

- ~~1. Contain not less than 25 percent combined post-consumer and preconsumer recovered material, and shall comply with Section 505.2.3.~~
- ~~2. Contain not less than 50 percent combined post-consumer and preconsumer recovered material.~~

~~**505.2.3 Recyclable building materials and building components.** Building materials and building components that can be recycled into the same material or another material with a minimum recovery rate of not less than 30 percent through recycling and reprocessing or reuse, or building materials shall be recyclable through an established, nationally available closed loop manufacturer's take-back program.~~

~~**505.2.4 Bio-based materials.** Bio-based materials shall be those materials that comply with one or more of the following:~~

- ~~1. The bio-based content is not less than 75 percent as determined by testing in accordance with ASTM D 6866.~~
- ~~2. Wood and wood products used to comply with this section, other than salvaged or reused wood products, shall be labeled in accordance with the SFI Standard, FSC STD-40-004~~

~~V2-1 EN, PEFC Council Technical Document or equivalent *fiber procurement system*. As an alternative to an on-product label, a Certificate of Compliance indicating compliance with the *fiber procurement system* shall be permitted. Manufacturer's *fiber procurement systems* shall be audited by an accredited third-party.~~

~~3. The requirements of USDA 7CFR Part 2902.~~

~~**505.2.5 Indigenous materials.** Indigenous materials or components shall be composed of resources that are recovered, harvested, extracted and manufactured within a 500-mile (800 km) radius of the building site. Where only a portion of a material or product is recovered, harvested, extracted and manufactured within 500 miles (800 km), only that portion shall be included. Where resources are transported by water or rail, the distance to the building site shall be determined by multiplying the distance that the resources are transported by water or rail by 0.25, and adding that number to the distance transported by means other than water or rail.~~

Add new definition as follows:

SECTION 202 DEFINITIONS

ENVIRONMENTAL PRODUCT DECLARATION. A report for a product or material based on a product's life cycle and other relevant information relevant to its environmental impact.

Add new standard(s) as follows:

CSA

CAN/CSA-ISO 14025-07(R2012) Environmental labels and declarations – Type III environmental declarations – Principles and procedures (Adopted ISO 14025:2006, first edition, 2006-07-01)

ISO

21930-2007 Sustainability in building construction – Environmental declaration of building products

Reason: Section 505 is hard to fail. The section currently recognizes individual product attributes for used, recycled, recyclable, bio-based and indigenous categories. However, these individual product attributes are in aggregate so common as to make it difficult to build without complying with the section. For example, consider concrete and steel, two common heavy materials. Steel averaged 88% recycled content in 2012 (<http://www.recycle-steel.org/Recycling%20Resources/~media/Files/SRI/Releases/003%20Steel%20Recycling%20Rates%20Graphs.pdf>). Common steel products, such as rebar, include more than 95% recycled content. Concrete is typically 60% to 75% aggregate. (<http://www.cement.org/cement-concrete-basics/how-concrete-is-made>) The concrete aggregate, stone and sand, will always be local, certainly well within the 500 mile radius allowed for "indigenous" materials. Many buildings would get to 55% by weight based on the use of steel and concrete alone. The existing Section 505 becomes "busy work" that bulks up the IgCC with unneeded calculation and record keeping. This proposal deletes the existing Section 505.

This code change proposal substitutes Environmental Product Declarations (EPDs). EPDs are emerging as one way to compare the environmental performance of competing products, including impacts from manufacturing and ultimately disposal. EPDs would include all the product attributes in the existing section. The new section would also encourage manufacturers to reduce their environmental impacts by making it more likely that product buyers will compare competing products based on a broad set of environmental attributes.

Enforcing the new section is simple for the building official. No new building level calculations are required by the new section. If there are 10 EPDs for products in the building, the criteria would be met. ANSI has begun an accreditation program for organizations that certify EPDs.

Cost Impact: Will increase the cost of construction. This code change proposal would increase costs to the manufacturer who chooses to obtain an EPD for their building product.

GG 192-14 : 505 (NEW)-CONNER1215