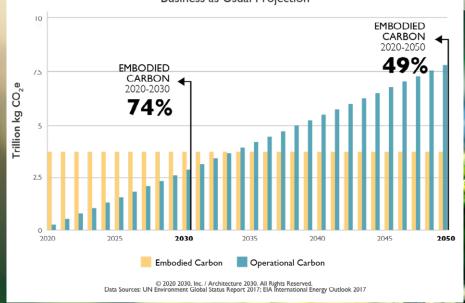
## Total Carbon Emissions of Global New Construction from 2020-2050 Business as Usual Projection



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## **Embodied Carbon on Novalis Declare Labels**



Novalis is excited to announce the addition of embodied carbon values to all Novalis Declare labels. If you're involved in specifying sustainable building products, chances are you've heard this term "embodied carbon" with increasing regularity this past year. But what exactly is embodied carbon, and how does it impact a building's environmental footprint?

As Circular Ecology defines it, embodied carbon is the "carbon footprint of a material." The embodied carbon of a product represents the total greenhouse gases (GHGs) released to extract the raw materials, transport and refine them, and construct a new **product.** Embodied carbon can be measured from cradle to site, i.e. from raw material extraction to the location of use, or cradle to grave, from raw material to the product's end-of-life. However, it is typically reported as a cradle to gate value, from raw material extraction until the finished good leaves the factory.

Cradle to gate is typically used to make the value relevant regardless of where in the world it is specified, since the cradle to site or grave values include assumptions about transportation, installation, and end-of-life that may be very different if the product is specified in Europe versus in the United States or Asia. These values are calculated in life-cycle analyses and then published in product-specific Environmental Product Declarations, or EPDs, after being 3rdparty verified. The impact category of Global Warming Potential on EPDs, reported in kilograms of carbon dioxideequivalent emissions per meter squared of product, is what we know as the embodied carbon of a product.

Traditionally, there has been much emphasis on reducing the operational carbon of a building through energy efficiency measures. Making a building energy efficient is incredibly important and pays dividends in the long run. For the first 10-15 years of a building's life, though, embodied carbon will actually



have a greater impact. According to the non-profit Architecture 2030, for a building constructed in 2020, embodied carbon will make up 74% of its total carbon emissions between 2020 and 2030. Between now and 2030, the world needs to drastically reduce carbon emissions to meet global targets of keeping warming below 1.5 degrees Celsius. Reducing the embodied carbon of new buildings needs to be a top priority.

Novalis is very excited about the advent of the Embodied Carbon in Construction Calculator (EC3), a tool on which specifiers can compare the embodied carbon of projects and find products that will help them meet reduction goals. Greater transparency around embodied carbon is absolutely necessary across all building product verticals in order to provide the architecture and design community with the tools they need to drive reductions.

To contribute to this global movement, Novalis recently added embodied carbon values to all Novalis Declare labels. These Novalis Declare labels that list the embodied carbon of each product are currently available for all major Novalis flooring constructions. The labels reflect



Novalis Innovative Flooring

Final Assembly: Zhenjiang, Jiangsu, China Life Expectancy: 25 Year(s) Embodied Carbon: 8.75 kg CO2-eq ➡ Declared Unit: 1 square meter of Novalis Glue Down LVT flooring End of Life Options: Recyclable (100%)

## Ingredients:

Filler: Calcium carbonate; Polymer: Polyvinyl chloride; Plasticizer: Octadecaneoic Acid, 10-Chloro-9-Methoxy, Methyl Ester; Dioctyl Terephthalate, DDTP; Stabilizer: Epoxidized Soybean Oli; Calcium stearate; Zinc Stearate; Coating: Epoxy Acrylate; Havmethylen Diacrylate: Diporylene Glycol Diacrylate; Trimethylol Propane triacrylate; Tripropylene glycol diacrylate; 2-Hydroxyethyl methacrylate; Tripropylene glycol Neopentyl Glycol Diacrylate; 24.6-Trimethyl Benzoyl Diphenyl Phosphine Oxide; 2-Hydroxy-2-Methyl-Phenyl-Propan-1-One; Pigment: Carbon black

Living Building Challenge Criteria: H3 Red List BCR ed List Free % Disclosed: 100% at 100ppm CLBC Red List Approved VOC Content: Not Applicable Declared H1 Interior Performance: CDPH Standard Method v11-2010 H4 Responsible Sourcing: Not Applicable NOV-0001 EXP. 01 MAR 2022 Original Issue Date: 2015

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g constructions. The labels reflect the embodied carbon values that were recently determined and third party-verified during the 2020 Novalis Environmental Product Declaration (EPD) renewals. For products that were being produced during the 2014 and 2015 Novalis EPD processes, the 2020 embodied carbon values show significant reductions because of improvements in the production process and supply chain.

Novalis transparently declaring each product category's embodied carbon is an exciting step. Architects and designers are facing an increasing number of requests and mandates to reduce the embodied carbon of interior design and building projects. To do so, specifiers need products with clearly listed and third-party verified embodied carbon values that can be entered directly into the project's embodied carbon calculations. Novalis Declare labels now offer that.

Novalis is proud to take its commitment to transparency to the next level with Declare labels that now offer complete visibility into the products' embodied carbon as well as material health.



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If you want to learn more, feel free to reach out to our Sustainability Manager, **Nicole Granath**, at <u>nicole.granath@novalis-intl.</u> <u>com</u>. Nicole works across product lines and operations to advance the company's commitment to producing flooring to the highest health and environmental standards.

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