

# TECHNICAL BULLETIN # 07

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## *Formance* **Indoor Air Quality**

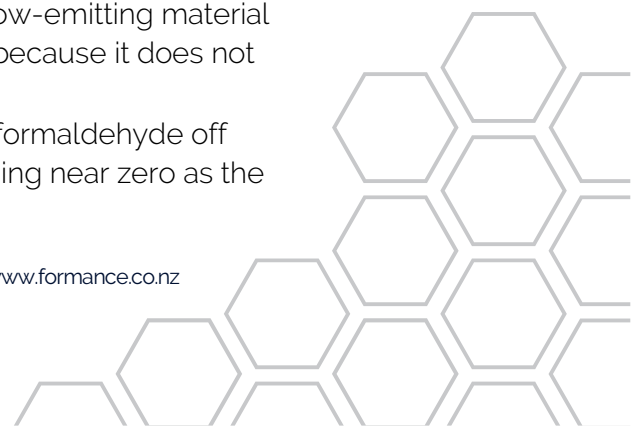
A Formance SIP home or commercial building allows for better control over indoor air quality because the airtight building envelope limits incoming air to controlled ventilation. Controlled ventilation filters out contaminants and allergens, and also allows for incoming air to be dehumidified, reducing the possibility for mold growth.

There are a variety of ventilation strategies that can be used to provide fresh air to airtight homes. These vary by climate, but are relatively inexpensive and operate on automatic control systems without the need for homeowner action.

Formance SIPs do not contain any VOCs or other harmful chemicals that can affect occupant health. The components used to make SIPs (foam, OSB, and adhesive) meet some of the most stringent standards for indoor air quality.



- EPS uses pentane, a non-CFC blowing agent that dissipates shortly after production. EPS has no off gassing and many EPS manufacturers are GREENGUARD certified.<sup>1</sup>
- SIP homes have qualified under the American Lung Association's Health House® program that has stringent standards for indoor air quality.<sup>2</sup>
- The adhesives used in Formance SIP production do not contain any measurable amounts of VOCs that can be harmful to occupants.<sup>3</sup>
- The oriented strand board (OSB) used in SIPs has often been inaccurately associated with the formaldehyde emissions that occur in fiber board and other composite products using urea-formaldehyde adhesives. The phenolic formaldehyde adhesives used in OSB have only trace amounts of formaldehyde in the finished product that do not jeopardize a home's indoor environment or pose any health risks.
- The OSB used in SIPs meets the requirements for a low-emitting material under the LEED for New Construction rating system because it does not contain any urea-formaldehyde adhesives.<sup>4</sup>
- Tests of OSB panels fresh from production revealed formaldehyde off gassing of less than 0.1 parts per million (ppm), declining near zero as the



panels age. To put this in perspective, there is more formaldehyde naturally occurring in many foods, such as apples and onions, or the human blood (3 ppm), than in a home built with SIPs.<sup>5</sup>

- OSB easily meets many of the USA's leading formaldehyde emissions standards, such as U.S. HUD Manufactured Housing Standard and the California Air Resource Board (CARB) Air Toxic Control Measure for Composite Wood Products.<sup>6</sup>

<sup>1</sup> <http://www.epsmolders.org/5.html>

<sup>2</sup> Heathers Home -

[http://www.ferriercustomhomes.com/live\\_test/services/custom\\_homes/projects/Heathers%20Home/statistics/](http://www.ferriercustomhomes.com/live_test/services/custom_homes/projects/Heathers%20Home/statistics/)

<sup>3</sup> Miller, Gloria B. Product Stewardship Letter from Rohm and Haas. November 21, 2008.

<sup>4</sup> EQ Credit 4.4, LEED for New Construction version 2.2

<sup>5</sup> Emery, John A. Structural Wood Panels and Formaldehyde. APA-The Engineered Wood Association, April 2002.

<sup>6</sup> Facts on Structural Wood Panel Formaldehyde Emissions, APA-The Engineered Wood Association. February 2008.

