



## PANELITE BONDED SERIES SUSTAINABILITY INFORMATION

### PANELITE'S FOCUS: RESOURCE-EFFICIENCY

Panelite is committed to providing resource- and energy-efficient materials for architecture. Our approach to sustainability focuses on **saving resources both in the production of our materials (reduced raw materials and energy) and in their application (reduced labor, time, materials to install; improved daylighting, reduced lighting energy for the finished space)**. Ongoing product development is dedicated to resource and energy conservation through proprietary technologies.

#### BONDED SERIES PANELS ARE RESOURCE-EFFICIENT IN 3 KEY WAYS

<b>LESS MATERIAL</b>	<b>70-80% AIR</b> within the honeycomb composite panel 70-80% less raw material compared to cast sheets <u>ClearConnect™</u> system minimizes framing → <b>Saves material in production and installation</b>
<b>LESS WEIGHT</b>	Approximately <b>40 lbs/panel</b> High stiffness to weight ratio Less material, time + labor to install → <b>Saves material, time and labor in installation</b>
<b>MORE LIGHT</b>	Up to 65% diffuse light transmission for natural daylighting or backlighting. → <b>Saves lighting energy, optimizes user comfort/productivity</b>

See following pages for more details on Bonded Series panels' resource-efficiency.



# PANELITE BONDED SERIES SUSTAINABILITY INFORMATION

## BONDED SERIES PANELS ARE RESOURCE-EFFICIENT IN 3 KEY WAYS

### 1. LESS WEIGHT

A single Bonded Series panel weighs approximately 42 pounds and does not flex. It can be carried by a single installer, saving time and labor onsite.

The panels' exceptional stiffness-to-weight ratio also means that little or no structural support is needed, saving time and materials. Our ClearConnect™ system is recommended for aesthetically minimal details and highly efficient installation. Bonded Series panels are easy to fabricate on site, further making the installation process more efficient. View videos from the Bonded Series installation at Westfield headquarters, Los Angeles.

### COMPARATIVE WEIGHTS OF MATERIALS IN POUNDS PER SQUARE FOOT (PSF)



### BONDED SERIES PANELS ARE 70-80% AIR

- Can be carried by a single installer
- Lightweight to carry, easy to work with, saving time and labor in installation
- Little or no framing required, saving materials, time, and labor in installation

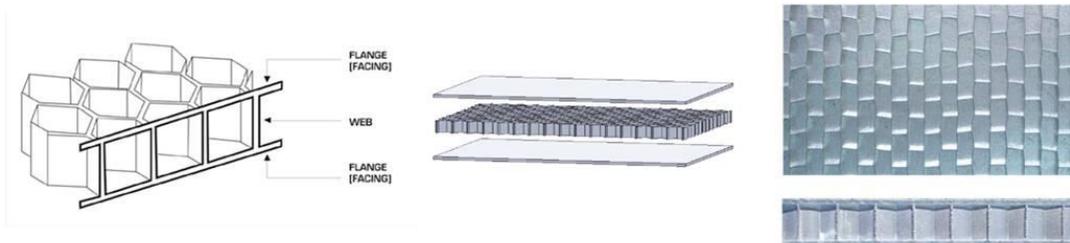


## PANELITE BONDED SERIES SUSTAINABILITY INFORMATION

### 2. LESS MATERIAL

Bonded Series™ panels apply honeycomb technology to produce lightweight, self-structural composite panels using 70-80% less raw material than a solid resin sheet of comparable thickness, to reduce environmental impact and make installation more efficient.

Honeycomb core consists of a lightweight cellular network in which each cell wall acts like the web of an I-beam, when the honeycomb is bonded to thin facings. The resulting sandwich panel has the exceptional stiffness and strength of a network of small I-beams while maintaining a very low weight.



#### RELATIVE STIFFNESS, STRENGTH AND WEIGHT OF HONEYCOMB STRUCTURE VS. SOLID SHEET

	Solid Metal Sheet <i>t = 1" of metal or resin</i>	Sandwich Construction <i>t = 1" of metal or resin PLUS 1" of honeycomb</i>	Thicker Sandwich <i>t = 1" of metal or resin PLUS 2" of honeycomb</i>
<i>t = thickness</i>			
Relative Stiffness	100	700 <b>7 times more rigid</b>	3700 <b>37 times more rigid</b>
Relative Strength	100	350 <b>35 times as strong</b>	925 <b>9.25 times as strong</b>
Relative Weight	100	103 <b>3% increase in weight</b>	106 <b>6% increase in weight</b>

If a solid sheet of metal or resin were split into two sheets of half the thickness each, and a lightweight honeycomb structural core was bonded in between, that honeycomb would provide:

for twice the thickness:  
**700%** the rigidity  
**350%** the strength  
 and only a **3%** increase in weight

for four times the thickness:  
**3700%** the rigidity  
**925%** the strength  
 and only a **6%** increase in weight

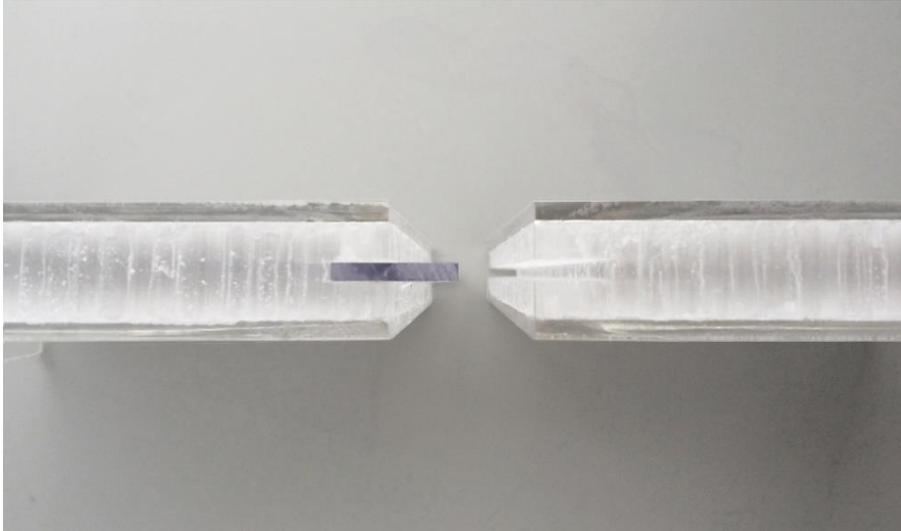
With this exceptional strength-to weight ratio, honeycomb is an inherently resource-efficient material.



## PANELITE BONDED SERIES SUSTAINABILITY INFORMATION

### LESS MATERIAL: INSTALLATION EFFICIENCY

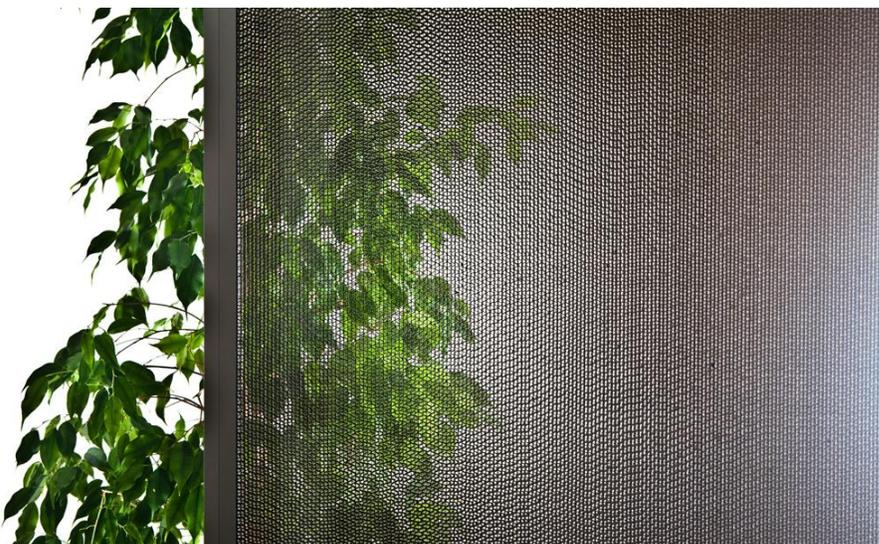
Our ClearConnect™ system is a series of nearly invisible installation details for Bonded Series panels that takes advantage of the inherent structure of honeycomb technology to further reduce materials, labor and time onsite.



BF-ITL3 Interlocking Joint detail shown on B-RCCT panel

### LESS MATERIAL: RECYCLED CONTENT

Our Ecoben B-R100CT panels use 100% post-consumer recycled cardboard honeycomb cores.





## PANELITE BONDED SERIES SUSTAINABILITY INFORMATION

### 3. MORE LIGHT

Bonded Series panels allow up to 65% light transmission, increasing natural daylighting of interior spaces, reducing energy requirements for lighting and increasing user comfort and productivity.



At Prague University (left, by VYŠEHRAD Atelier) and Nuno Nono Nursery (right, by Girod + Anton Arquitectos) designers specified Bonded Series partitions to provide visual privacy and color while maximizing natural daylighting.

➔ Download [LEED information](#) for Bonded Series.