

## OmniTec Range - HI & HG

2014

The OmniTec panel is a sandwich panel with a fibre reinforced epoxy skin that offers improved impact properties over competitive products. The skins are bonded to a thermoplastic polypropylene (PP) honeycomb core. The stiffness is dependent on the thickness of the panel itself and the thickness of the face sheets. The continuous production-line guarantees a consistent high quality of the product.

### Face Sheets

The face sheets can be between 0.7 and 3.0 mm thick with alternative face sheet colours (subject to minimum quantities).

### Core Material

The polypropylene honeycomb core provides optimal properties for most standard applications; other cores are available on request.

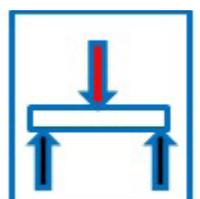
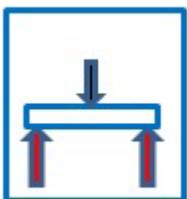
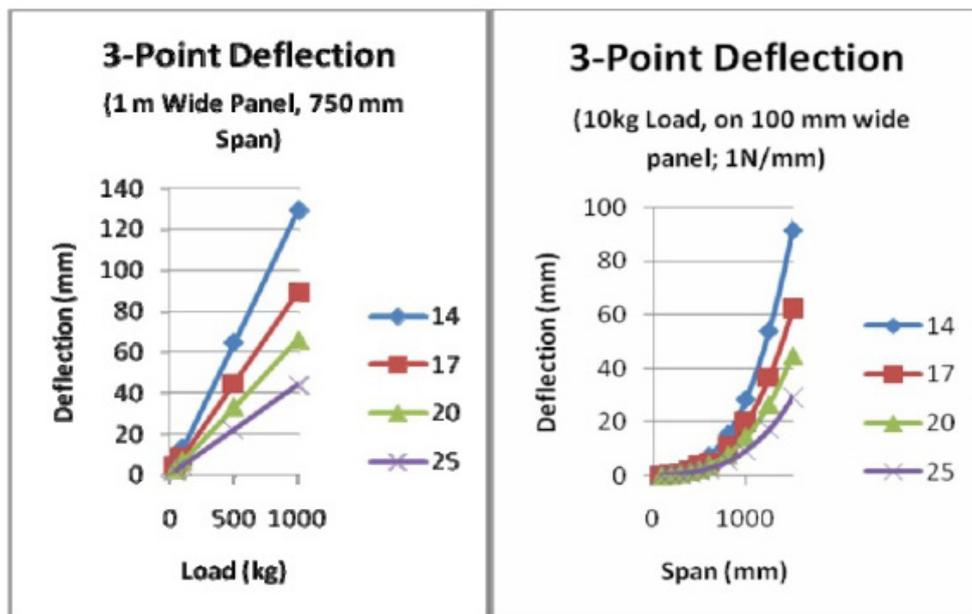
### Processing

Machining of OmniTec panel is very easy; tools for wood machining can be used for cutting, milling and drilling. Suitable joining techniques for the sandwich panels include adhesive bonding and riveting.

### Panel Dimensional Capabilities

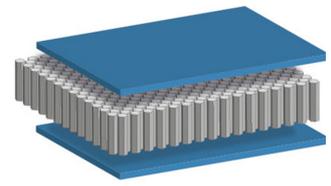
Panel	PPHC - UPGCH108
Length (tolerance: <3000mm, >3000mm)	≤13,600mm (±2mm, ±4mm)
Width (standard tolerance: 2400mm)	≤ 2mm, ±4mm)
Standard Panel Thickness (tolerance)	17mm, 25mm, 30mm
Panel Thicknesses	7 -100mm
Face sheet thickness	1 - 3mm

### 3-Point Bend Test<sup>2</sup>



Unlike many of OmniTec's competitive products, Omnia are proud to publicise the bending and strength characteristic of OmniTec.

1. Calculation based on heat-transmission resistances of 0.15 m<sup>2</sup>K/W (outside) and 0.35 m<sup>2</sup>K/W (inside), respectively.  
 2. The values are calculated and should be used only as first indication. Variations of the properties (±10 %) are possible, because of the raw materials.



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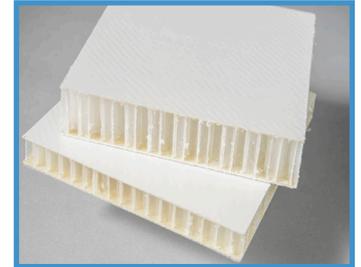
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The **OmniTec HI** is a high performance bonded panel providing an impressive reduction of weight without any compromise in strength. The 17-HI panel (17 mm thick) weighs just over 4 kg/m<sup>2</sup>.

### Face Sheets

The inner skin has an epoxy matrix giving it greater impact strength in comparison with other mid-range lightweight panel products. The external skin offers a high strength to weight ratio due to its fibre reinforcement. The surface is white in colour (RAL9010) and perfect for painting with standard commercial vehicle paints (for polyester).

This panel is also available in an attractive double-sided '**High Gloss**' smooth finish and it referred to as the **OmniTec HG**



HI

### Mechanical & Physical Properties

Property	Unit			
Omnia Ref.		17-HI	20-HI	25-HI
Thickness	mm	17	20	25
Weight	kg/m <sup>2</sup>	4.1	4.3	4.6
Compressive Strength	MPa	>1.0	>1.0	>1.0
Coefficient of heat transmission k-value <sup>1</sup>	W/m <sup>2</sup> K	1.5	1.5	1.4



HG

## Omnia FRP

Similar to the OmniTec HG, the Omnia FRP panel refers to our lightweight panels with a 'High Gloss' exterior skin for a relatively low cost. This lightweight budget alternative also comes with an attractive double-sided 'High Gloss' finish.

### Face Sheets

The inner skin is white in colour, providing a clean and desirable appearance. The external skin is a gel coat which is a completely smooth finish. Omnia FRP panels are ideal for dry freight and hospitality applications where aesthetics are a premium requirement.



FRP

### Mechanical & Physical Properties

Property	Unit				
Omnia Ref.		14-FRP	17-FRP	20-FRP	25-FRP
Thickness	mm	14	17	20	25
Weight	kg/m <sup>2</sup>	4.5	4.8	5.0	5.3
Compressive Strength	MPa	>1.0	>1.0	>1.0	>1.0
Coefficient of heat transmission k-value <sup>1</sup>	W/m <sup>2</sup> K	N/A	1.5	1.5	1.4

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