

## ecodek® Hollow vs Solid WPC Boards

Thinking that a hollow deck board would be better value?

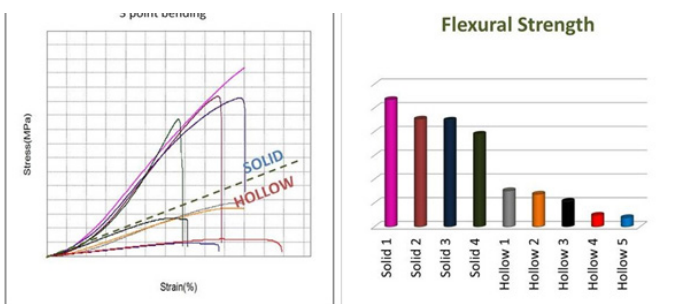
Then read this:

When comparing solid composite decking to hollow composite decking, it is important to consider the following facts:

- 1 A hollow deck board installed outside as part of a typical deck will NOT last as long as a solid board in the same environment\*
- 2 Hollow boards can hold water and moisture internally and once water has got in, it is very difficult to shift; this constant dampness will accelerate the rate of decomposition of the board over an equivalent solid board.
- 3 Hollow boards require the use of end caps to cover their unsightly exposed ends; these caps do not have the same raw material characteristics as the decking so will weather differently to the boards themselves.
- 4 Hollow boards are not nearly as resistant to impact damage due to their reduced wall thickness and can you imagine the work involved in replacing a hollow deck board that has become damaged? Even worse, the hidden clip system will mean that you will have a lot of work to do actually getting to the damaged board!
- 5 Solid decking can be installed without a fall, read the installation instructions for any hollow system & it will state that their product must be installed on a fall, usually around 1 in 40, **that's nearly 5" over a 16' board!**
- 6 Solid decking is easier to screw into as it will not collapse as the screw head buries itself into the board. The manufacturers of hollow decking have got around this issue by producing a hidden clip system, this clip system not only adds expense (as it is normally charged for as an extra) but also does not offer the same ultimate fastening strength that is available when screwing through a solid board \*\*
- 7 Solid decking offers much better noise absorption qualities than hollow decking making it much quieter to walk on.
- 8 If you want a composite decking product that is as easy and simple to work with as wood, and you want it to last 25 years or more, then a solid board such as ecodek® is your only choice.

\* Based on boards of similar dimension and material make-up.

\*\* Based on boards of similar dimensions and material composition and when using a quality composite decking screw such as the ones supplied by Ecodek.



Ecodek only supply SOLID composite deck boards and concerns have recently been expressed to us from a variety of sources that some manufacturers' hollow composite boards are performing poorly and failing, sometimes within 12 months of use. With a view to trying to assess the accuracy of these concerns, different solid and hollow samples were tested at the Ecodek testing facilities using a Shimadzu AGS-10kNXD, with a 10 kN load cell.

The flexural properties of each sample were studied using the 3 point bending technique, as per standard EN ISO 178, at a constant rate of  $(2 \pm 0.5)$  mm/min.

The results obtained from the compared samples are depicted in the figure above. There is a clear differentiation between the solid and hollow samples with regards to mechanical properties. The performance of the solid samples that we tested significantly exceeds that of the hollow samples, both in terms of elasticity and maximum strength.