

Environmental aspects with Re-board

Re-board is sandwich board

Sandwich board designs utilize the advantage in strength that can be derived from placing a larger portion of material near its surfaces compared to its center. In addition, a stronger surface material can be used. Thereby high strength can be achieved at a lower weight and less material usage compared to homogenous products.

Sandwich designs are manufactured in many different materials, along two main principles:

One principle is to join two homogenous materials of different density, for example using a hard plastic surface and a soft plastic foam core. This type is well suited for shaping by different type of tools, and give support for screws.

The other principle is to minimize the core part even more by applying a framework structure much like honeycomb. The resulting board is very lightweight but does generally not allow much shaping after manufacture, since it contain very much air and would leave gaping holes and irregular edges if cut, sawed or screwed in.

Re-board is unique in the sense that its structure belong to the second principle – giving very low weight – but its characteristics are the same as the first – it does allow shaping and cutting.

Re-board consist of paper

Both surface and core is made out of different paper qualities and all of these contain a portion of re-used fibers. All paper suppliers are Forest Stewardship Council (FSC) certified. The surface liner has a very thin LDPE layer inbetween paper layers as a moisture barrier, which assure that the board will keep its planar flatness in varying environmental conditions, including the occasional rain shower. As adhesives only water based mixtures without hazardous components are used. Hence, all the components in the board have good environmental characteristics in both manufacturing, use and disposal lifecycle phases. As a board it is to 95% made up of renewable sources and is 100% recycleable.

Re-board can be made locally at low energy and material consumption

The machinery necessary to manufacture Re-board is less complicated than the corresponding setup for the manufacturing of particle boards. It makes it possible to invest in local manufacturing at much lower volumes and save on transportation costs with negative pollution side effects. In addition to good transportability as a ready-made product, the primary produce is very dense paper rolls which also require a minimum of transport. As a final conclusion, a material filled with air require much less energy in the making compared to dense products pressed together at high force, such as chipboard and MDF.

Comparison, different board types

	Particle board	Plastic board	Re-board
Lowest material content			x
Renewable content	x		x
Recyclable			x
Waste used as energy	x	x	x
Formaldehyd free			x